

April 12, 1932.

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1,853,044

REFRIGERATOR CABINET CONSTRUCTION

Filed April 30, 1928

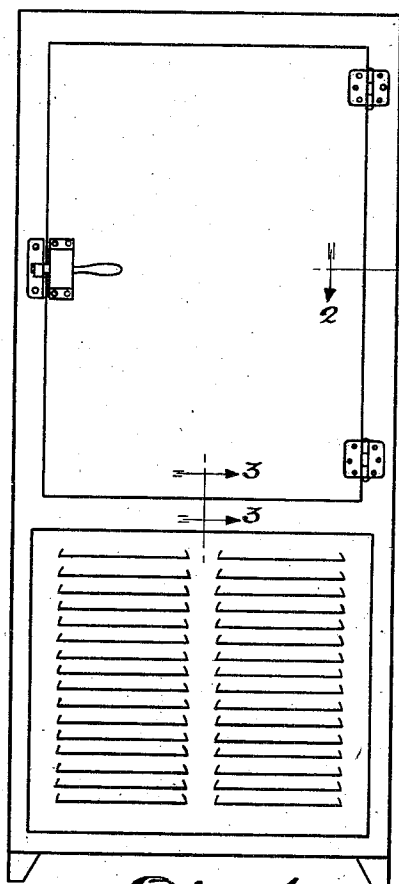


Fig. 1.

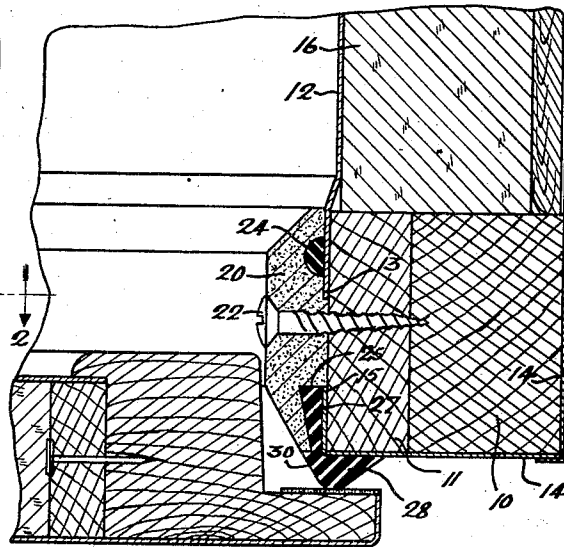


Fig. 2.

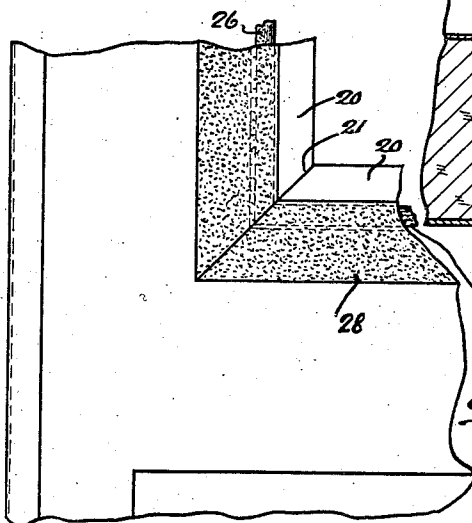


Fig. 3.

Fig. 4.

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REFRIGERATOR CABINET CONSTRUCTION

Application filed April 30, 1928. Serial No. 274,047.

This invention relates to refrigerator cabinet construction. An object of the invention is to provide an improved form of door opening construction in a cabinet having heat insulating walls and an interior metal lining, whereby no moisture is permitted to enter into the insulating material adjacent the door opening and cause deterioration thereof and bad odors to escape therefrom and taint the food within the refrigerator.

A more specific object is to provide a moisture resisting molded bituminous composition facing strip for said door opening which overlies the free edge of the metal lining at the door opening and provides a neat looking non-corroding moisture proof construction.

Another object is to provide an elastic sealing gasket, preferably of soft rubber, which is partially clamped under said facing strip whereby to seal the joint between the facing strip and its underlying construction, and which has a projecting portion extending around the door opening and serving as a bumper gasket for the refrigerator door.

Further objects and advantages of the present invention will be apparent from the following description, reference being had to the accompanying drawings, wherein a preferred embodiment of one form of the present invention is clearly shown.

In the drawings:

Fig. 1 is a front elevation of a refrigerator cabinet having heat insulating walls completely enclosing the food chamber.

Fig. 2 is a horizontal section on line 2—2 of Fig. 1 showing the construction of the vertical sides of the door opening according to this invention.

Fig. 3 is a vertical section on line 3—3 of Fig. 1 showing the bottom construction of the door opening, which is similar to Fig. 2.

Fig. 4 is an enlarged view looking toward the lower left corner of the door opening, the door being removed, and shows the mitered corner joints of the facing strip and the soft rubber gaskets.

Similar reference characters refer to similar parts throughout the drawings.

In the drawings, 10 designates a wood corner post of the cabinet frame and 11 a wood

door joint fixed thereto. 12 is the sheet metal interior lining, preferably covered with enamel or porcelain, having its free edge 13 at the door opening partially overlapping the wood joint 11. 14 is the exterior sheet metal casing forming the exterior wall of the cabinet having its free edge 15 at the door opening turned in and partially overlapping the joint 11 in opposed relation to the free edge 13 of the inner lining, as clearly shown in Figs. 1 and 2. These free edges 13 and 15 extend completely around the door opening, that is the section shown in Figs. 1 and 2 is typical of the top, bottom, and both vertical sides of the door opening. Heat insulating material 16 such as ground cork or cork board, of suitable thickness, lies between the interior lining 12 and the exterior metal casing 14.

Now according to this invention a facing strip 20 is molded to any desired or suitable cross section from a moisture-resisting hard non-porous composition of fiber and bituminous materials and to suitable lengths according to the size of the door opening. These strips 20 are accurately mitered at the corners as shown at 21 in Fig. 4 and fixed upon the door opening to overlie the metal edges 13 and 15 by suitable screws or nails 22 (see Figs. 2 and 3). A continuous groove 24 is molded in the strip 20 where it overlaps the inner metal lining 12, and a second continuous groove 25, preferably of dove-tail section, is molded therein at its outer edge where it overlaps the outer metal casing 14. These grooves 24 and 25 therefore are continuous around the entire door opening. Within groove 24 there is clamped an elastic gasket 26, preferably of soft rubber, whereby the joint between strip 20 and inner lining 12 is absolutely sealed against moisture entering therein and causing rotting of the cork insulation and against odors escaping from the heat insulation and entering the food chamber. Within groove 25 there is clamped the dovetail portion 27 of the soft rubber gasket 30 while the projecting portion 28 of this gasket extends out beyond the exterior casing 14 and forms a suitable bumper gasket for the door flange 31 and serves to seal the joint

between the door and the door opening in the cabinet. The portion 27 of the gasket 30 seals the joint between the metal edge 15 of the outer casing and the facing strip 20 and so completely seals up the heat insulation space which includes the wood members 10 and 11. This sealing by gasket portion 27 is advantageous since moisture may pass to or odors may escape from the heat insulation material through the porous wood members or the joints and cracks therein. The facing strip 20 being molded from a moisture-resisting non-porous composition of bituminous material itself serves as a seal over the gap between the metal edges 13 and 15. Therefore, in many cases, the gasket 26 may be omitted and a sufficient seal obtained by the contacting relation between the metal edge 13 and the molded bituminous material from which facing strip 20 is made. For illustrative purposes, an example of the ingredients and proportions thereof forming a suitable moldable bituminous compound for forming the facing strips 20 is given as follows: 22 parts of mineral rubber of melting point about 300° F., 22 parts gilsonite or other similar hard asphalt of melting point about 300° F., 22 parts of Trinidad asphalt of melting point about 200° F., 17 parts of lacerated asbestos fiber, and 17 parts of an inert filler such as infusorial earth. The bituminous materials are first melted and then thoroughly mixed together with the asbestos fiber and filler in a suitable kneading machine to form a hot plastic mass. This plastic material is then put in suitable unheated molds and molded under high hydraulic pressure for only several minutes, after which the molded strips are removed from the molds and allowed to cool. The resultant molded material is especially well adapted for forming these facing strips 20 for refrigerator cabinets since it can be easily and economically molded to the desired section of the strip, since it is moisture proof and therefore completely seals off the space containing the heat insulation material, since it is non-corrodible and may be coated with a suitable finishing material, and since it may be as easily nailed or screwed in place as a wood strip.

While the form of embodiment of the present invention as herein disclosed, constitutes a preferred form, it is to be understood that other forms might be adopted, all coming within the scope of the claims which follow.

What is claimed is as follows:

1. In a refrigerator cabinet having a door and door frame therefor, an inner metal lining having a free edge overlapping said frame, an outer metal lining having a free edge overlapping said frame and opposed to the edge of said inner lining, a facing strip for said door frame overlying the edges of both said inner and outer linings, and seal-

ing gaskets interposed between each of said edges and the facing strip.

2. In a refrigerator cabinet having a door and door opening therefor, a cabinet inner metal lining having a free edge at said door opening, a facing strip for said door opening, and a rubber sealing gasket sealing the joint between said metal lining edge and strip.

In testimony whereof I hereto affix my signature.

HARVEY D. GEYER.