Dec. 15, 1931. G. C. BOHN 1,836,221

REFRIGERATOR

Filed Aug. 22, 1927 2 Sheets-Sheet 1

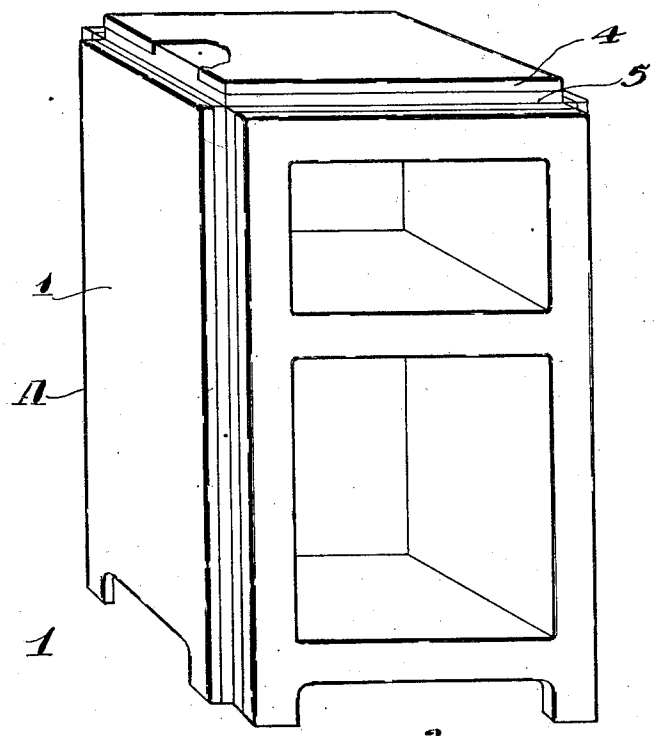


Fig. 1

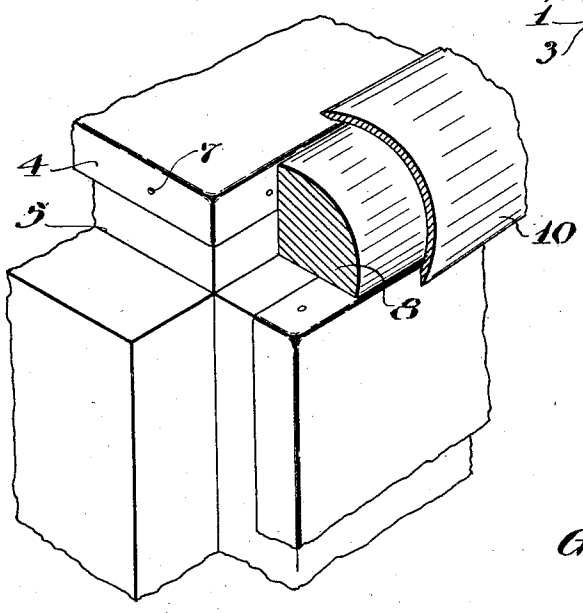


Fig. 2

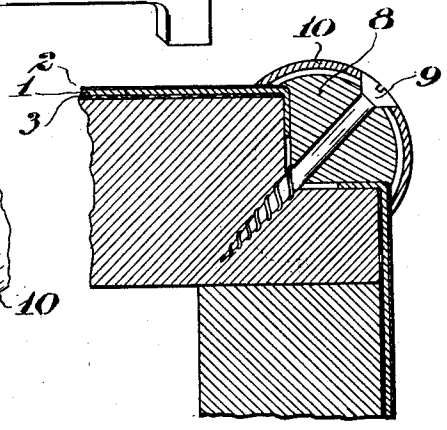


Fig. 3

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REFRIGERATOR

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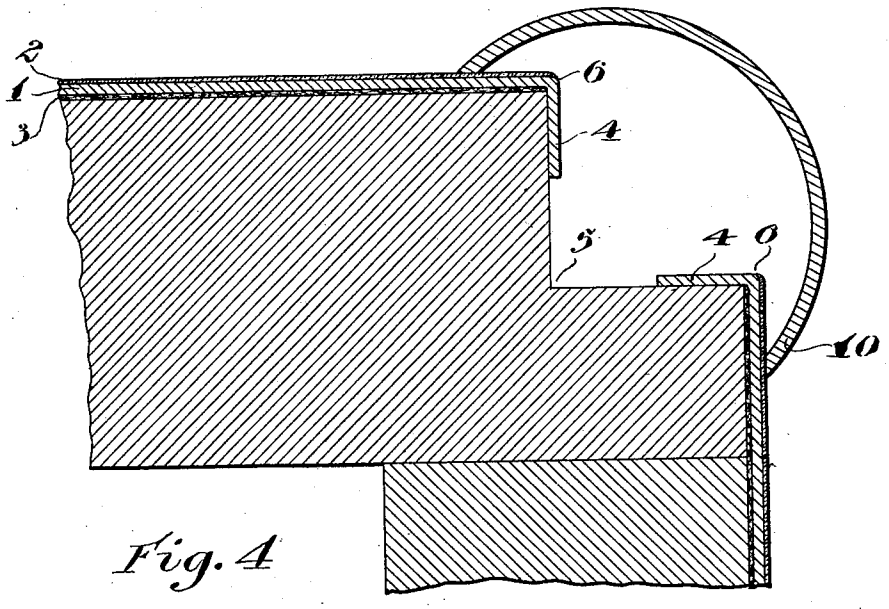


Fig. 4

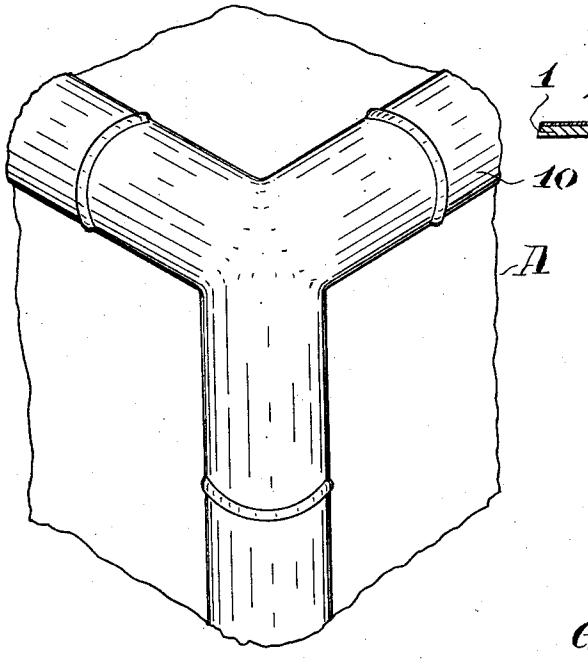


Fig. 5

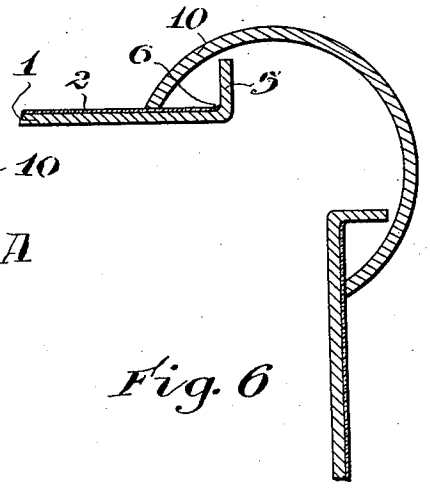


Fig. 6

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UNITED STATES PATENT OFFICE

GEBHARD C. BOHN, OF ST. PAUL, MINNESOTA

REFRIGERATOR

Application filed August 22, 1927. Serial No. 214,464.

This invention relates to the type of refrigerator shown in my co-pending application, Serial Number 671,042, filed October 26th, 1923; this application being filed to protect the inventive disclosure of such co-pending application, together with certain improvements.

In this application and the co-pending application, the refrigerator body is covered with sheathing plates, preferably coated with porcelain or vitreous enamel, which is easily chipped.

My invention has among its objects the securing of such plates at the corner edges of the refrigerator in such way as to prevent that chipping by the jars brought about by the shock or blows sustained by refrigerator corner constructions in handling, etc.

My invention has a further essential object in preventing in this type of refrigerator, moisture penetrating the refrigerator construction between the sheathing plates and damaging the built-up construction of a refrigerator covered by these plates.

In the accompanying drawings:

Figure 1 is a perspective view of a refrigerator constructed according to my invention, with the doors removed, and the sheathing plates in position ready for the application of the securing means.

Figure 2 is a detail view of one corner of a refrigerator, partly in section, constructed according to my invention.

Figure 3 is a vertical section taken through one of the upper edges and illustrating one adaptation of my plate securing means.

Figure 4 is a vertical section taken through one of the upper edges, illustrating a modified method of applying my securing means.

Figure 5 is a detail view of one corner of a refrigerator constructed according to my invention; and

Figure 6 is a sectional view through a modified construction of sheathing plates in cooperation with my securing means.

Referring to the drawings, A represents a refrigerator body ordinarily consisting of a built-up construction of frame work and insulation, with metal plates 1 forming an exterior covering or sheathing for the sides and top of the refrigerator. These plates, as shown, carry an exterior coating 2 of porcelain or vitreous enamel and are preferably separated from the interior frame work by an insulating lining sheet 3.

In carrying out my invention, the connecting edges between the top and walls, and of the walls themselves, are preferably cut away, as shown, to form right-angled re-entrant grooves 5.

In the adaptation of my invention, shown in Figures 3 and 4, the edges 4 of the enameled plates covering the top and side walls of the refrigerator are bent into said grooves, while in the adaptation of my invention shown in Figure 6, the edges 5 of the plates are bent up. In both the above showings of my invention, the edges of the plates terminate short of each other, constituting a space between the edges of adjacent plates. The porcelain or enamel covering 2 of the plates terminates short of the bent portion of the edges of the plates, as at 6, thereby preventing the breaking away of the enamel at the bent edge.

In carrying out my invention the plates are preferably lightly tacked in position as by tacks 7 to hold them in place while the corner securing means are being applied.

The plates, after being positioned upon the refrigerator body, are anchored and held in place by means shown particularly in Figures 3, 4, and 6.

In the adaptation shown in Figure 3, wooden corner strips 8 are fitted into the grooves 5 and are held in gripping contact with the bent edges of the plates by retaining screws 9 inserted centrally through said strips, and between the separated edges of the plates, into the frame work. To further protect the joint and secure the sheathing plates in position, I may, as shown in Figure 3, employ curved metal strips 10 covering the corner strips, the edges of said curved metal strips being held in contact with the surface of the sheathing plates by the retaining screws 9 passing through both the curved metal strips and the wooden corner strips.

In the adaptation shown in Figures 4 and 6, the wooden corner strip is omitted and the

curved metal strip 10 is secured over the corner by the securing screws 9, the curved metal strips being preferably of the character of a metal such as brass which will cause the edges of said curved metal strips to be held in spring contact with the sheathing plates through the pressure of the retaining screws.

In a refrigerator of the character described, where the frame work is completely covered by the metal sheathing plates and the interior of the refrigerator is ordinarily similarly lined, any moisture penetrating into the interior of the refrigerator construction becomes absorbed by the built up frame work and insulation, and, being kept from evaporation by the metal sheathing plates, brings about a swelling and damaging of the refrigerator. The problem of overcoming this objectionable feature and the further problem of constructing the enameled or porcelain covered sheathing plates so that they may be fastened on without injury or chipping of the enamel thereof, and of protecting the enamel from chipping by the jars or shocks from blows sustained by the refrigerator corner construction in handling, has required a great deal of experimentation to overcome, and has been overcome by my invention.

It has been the custom when refrigerators have been covered by metal sheathing plates to secure the plates in position by fastening means passing through the plates and into the refrigerator body. This makes openings through which moisture may penetrate the refrigerator body, where those openings are not tightly covered, and brings about a swelling of the interior construction and possible chipping of the enamel covering of the plate.

An object of my invention has been to secure the sheathing plates in position on a refrigerator of this character without the necessity of fastening means passing through the sheathing plates, and, at the same time, to employ anchoring means which will hold the separated edges of the sheathing plates firmly in position to prevent moisture from penetrating the refrigerator body between the edges of the sheets, and to fully protect the plates against the severe jars and shocks that are necessarily sustained by the corners of the refrigerators in handling, etc. It is apparent that the anchoring means must be such as to have a certain amount of cushioning or spring contact with the plates to prevent injury to the enameled surfaces thereof and to seal the openings between said plates so as to prevent moisture from penetrating the refrigerator body between the plates to the damage of said body. This result is secured, both by the resilient character of the wooden corner strips 8, which are preferably of soft wood, and the resilient character of the curved metal strips 9.

In carrying out my invention, it is apparent that the results may be obtained, as shown in Figure 3, by a combination of the metal corner strips and the covering spring metal springs 9, or by employing either the wooden strip or the curved metal strip alone, any of these constructions bringing about the desired cushioning action with respect to the sheathing plates.

I claim:

1. A refrigerating device of the character described, having a wall structure that will absorb water, said structure having a re-entrant portion at the corner of the wall, moisture proof plates exteriorly covering the walls with their edges bent into the re-entrant portion, relatively soft wooden strips positioned in said re-entrant portions, metal strips covering said wooden strips and overlapping said plates, and fastening means passing through said metal and wooden strips and between the edges of the under-lying plates into anchoring position in the frame work of the body and holding said wooden strips and metal covering strips in resilient contact with said plates, said fastening means being exteriorly adjustable and interiorly concealed within the wall structure of the refrigerator.

2. A refrigerating device of the character described, having a wall structure that will absorb water and be expansible thereby and contractible when dried, metal plates exteriorly covering the walls of said structure, with the edges of the plates covering the connecting walls being spaced apart, a metal strip covering the joint between said plates and overlapping said plates, and fastening means penetrating said metal strips and entering into anchoring position into the framework of said body between said plates, said fastening means being exteriorly adjustable and interiorly concealed within the wall structure of the refrigerator.

In testimony whereof, I affix my signature.

GEBHARD C. BOHN.