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E. F. DEACON

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REFRIGERATED DISPLAY CASE

Filed Feb. 26, 1927

Fig.1.

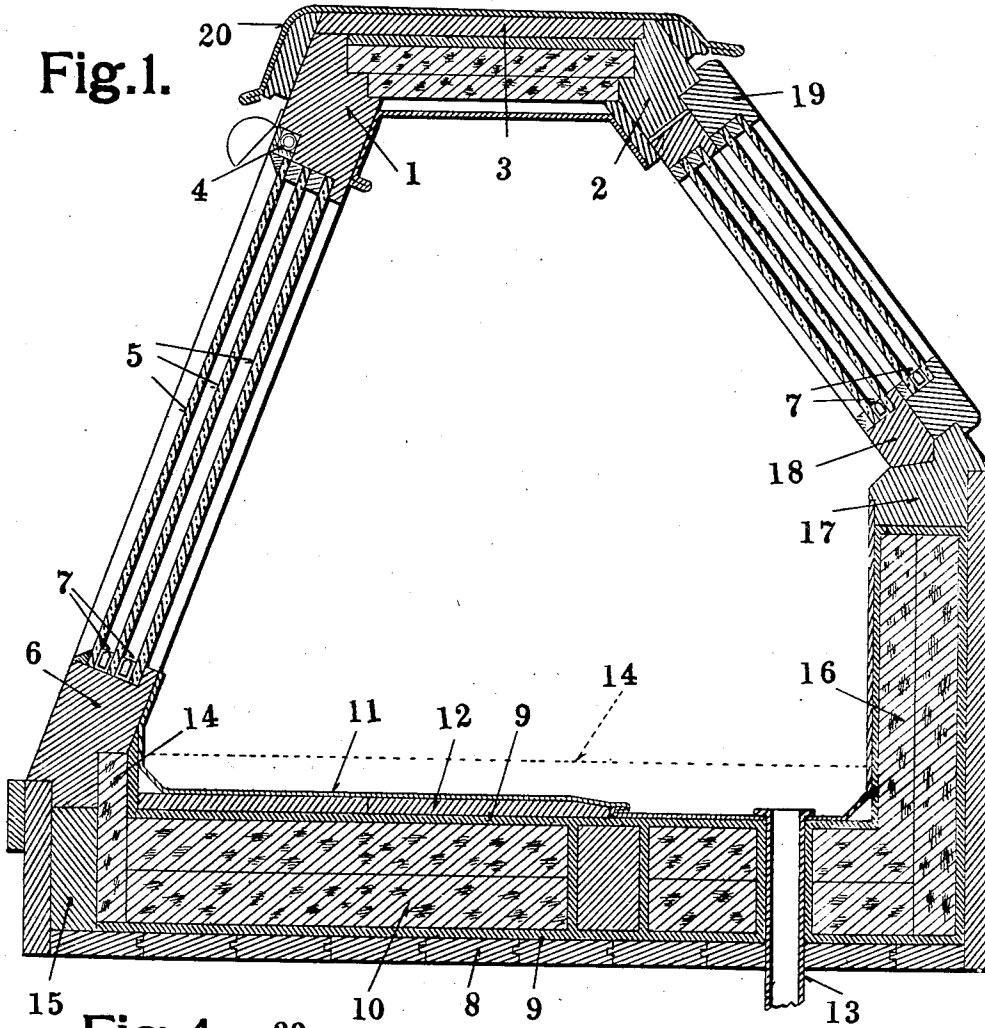


Fig.4.

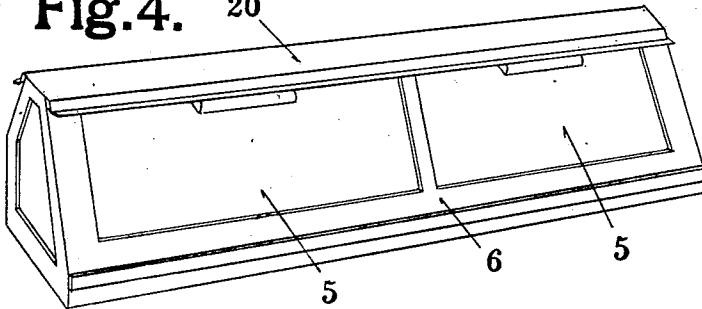
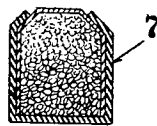


Fig.2.



BY

Fig.3.



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EDWARD F. DEACON, OF ST. LOUIS, MISSOURI, ASSIGNOR, BY MESNE ASSIGNMENTS, TO
BRECHT CASING COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF DELA-
WARE

REFRIGERATED DISPLAY CASE

Application filed February 26, 1927. Serial No. 171,134.

My invention relates to a refrigerated case for display of meat or other food products and its object is to provide certain improvements in the construction and operation thereof, among these being provision of means for protecting the joints of the case from moisture, preventing the fogging of the glass in the display window, improving the construction from the standpoint of insulation, and also improving the service door construction.

In the accompanying drawings Figure 1 is a transverse sectional view of a case embodying my invention; Figures 2 and 3 are sectional and plan views respectively, of a container or drying material which is employed to space the panes of glass in the display window; and Figure 4 is a perspective view showing the exterior of the front and one end of the case.

As shown, the top of the case comprises longitudinally extending wood frame members 1 and 2 and a top or cover member 3, also of wood. Frame 1 is provided with a longitudinally extending recess for the reception of wiring conduit 4, and to the lower edge of this member is secured the spaced panes of glass 5 forming the display window at the front of the case. These panes of glass are secured at the lower end to another longitudinally extending frame member 6 and the central pane of glass is spaced at the bottom from the inner and outer panes by means of trough-shaped containers 7 which are more fully described hereinafter.

The bottom of the case comprises a wall of wood 8 upon which is superposed insulating material comprising preferably slabs of cork board 10 and sheets of insulating paper 9, as shown. The upper surface of the bottom of the case is preferably covered by means of galvanized iron lining 11 so positioned by spacing member 12, or other suitable means, that moisture collecting therein will flow to drain pipe 13.

In the manufacture of display cases with wood framing it is necessary that joints be formed adjacent to corners of the case between the wood framing members, which construction is disadvantageous from the

standpoint of refrigerating efficiency of the case because these joints permit considerable heat exchange between the interior and exterior of the case. In order to overcome this difficulty and to cause the bottom of the case to constitute a jointless container from the standpoint of insulation, I secure to the cork-board forming the insulation at the bottom of the case slabs of corkboard, such as 14, which extend above the level of the bottom of the case and overlap the joint between the frame member 6 and the frame member 15. These slabs extend along the front and ends of the bottom. The joints between cork-board slabs 14 and between them and slabs 10 is formed by means of asphalt or other suitable insulating material, and in the same manner a rear wall of the insulating container is formed by securing corkboard slab 16 to slabs 10 and 14.

The longitudinally extending frame member 17 at the rear of the case forms the lower support for the sliding service doors 18 and 19. The upper ends of these doors are supported on the abutments on frame member 2, as shown in the drawings. The surfaces of the frame member 17 on which the doors rest and slide, are inclined inwardly, as shown, and the guide members for the doors, which are usual in display cases of the general type herein described, are omitted, with the result that instead of troughs being formed at this point for the collection of moisture it is discharged from the inclined bearing surfaces of the frame member 17 into the interior of the case. The inclination of door 18, together with its weight, results in its being maintained in the proper position on the frame member 15 while being slid to open and closed position without the necessity of employing the usual inner flange or guide on the frame member for this purpose. As indicated the service doors are preferably provided with windows, the panes being spaced at the bottom by members of the kind employed between the panes of the front display window.

In the operation of cases of the type described, considerable moisture collects on the top of the case due partly to condensation

and largely to the fact that the cold meat products dispensed from the case are placed on the top thereof during the course of delivery to the customer. Heretofore this liquid ran down the sides of the case into the joints between the upper frame members themselves and between these members and the window glass or the frames therefor, and also into the space provided for the electric conduit for the wires leading to the lamps by means of which the interior of the case is illuminated. This moisture caused the wood to deteriorate and the joints to become defective. In order to overcome this condition I have provided the top of the case with a water-proof cover 20, which may be of metal or other suitable material, and which is extended downward from the top of the case and spaced at least at the terminal portion from the side walls of the case. At the front of the case the terminal edge of the cover is so positioned as to be directly above the outer pane of the display window, whereby liquid collected by the cover will fall to the glass and thus be prevented from coming in contact with any of the joints at the top of the case. At the rear of the case the terminal edge of the cover extends outward to a sufficient extent that moisture discharged therefrom will fall on the outer surface of the doors and thus be prevented from entering the case at the joints between the doors and the upper frame.

Air in the insulating space between the panes of glass of the display window contains some moisture and variations in temperature of this air, due to variations in the internal temperature of the case or exterior temperature, will of course result in some "breathing" action—that is to say, escape of air from these insulating spaces at times and ingress of air from the exterior of the case or from the refrigerator chamber at other times. The moisture in this air tends to condense on the glass when the case is in operation for refrigeration of the products displayed therein thus obscuring the customers' vision of the articles in the case. In order to overcome this difficulty I place the container 7 at the bottom of the spaces between the panes of glass, both the display windows and the service doors using these containers as spacers for the panes. The containers are in the form of metal troughs extending longitudinally and containing suitable drying material, such as anhydrous calcium chloride. This drying material is retained in the container by means of mesh wire screen, as shown, which permits the moisture in the air to be taken up by the chemical and thus prevents the fogging of the glass.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

65 A refrigerator case provided with two serv-

ice doors, and means for supporting said doors to cause them to be slidable in parallel paths, said support comprising a bearing rail free from means capable of retaining liquid, said rail being provided with surfaces forming a groove for receiving the lower edge of the inner door and with a bearing surface for the lower edge of the outer door contiguous to said groove and inclined to drain laterally into the groove any liquid collecting thereon, said groove being so positioned as to discharge collected liquid laterally into the case.

In testimony whereof, I hereunto affix my signature, this 21st day of February, 1927.

EDWARD F. DEACON.