

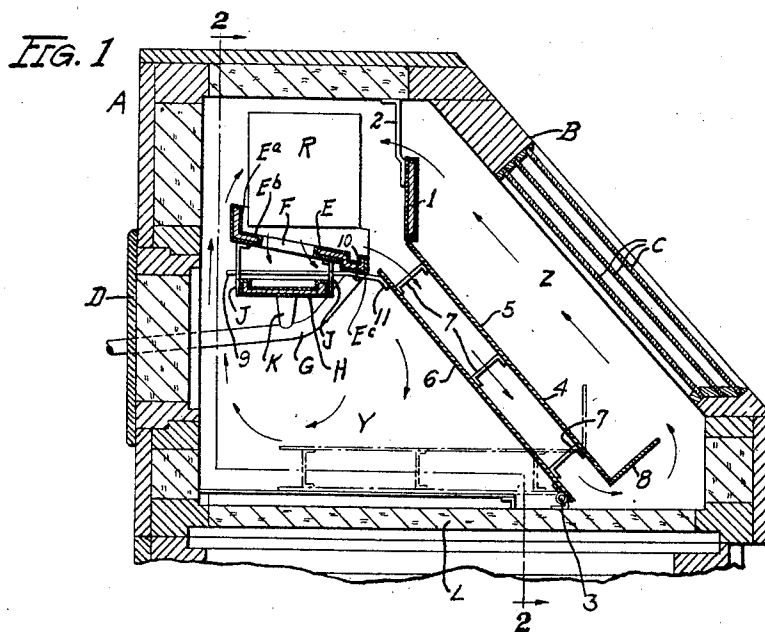
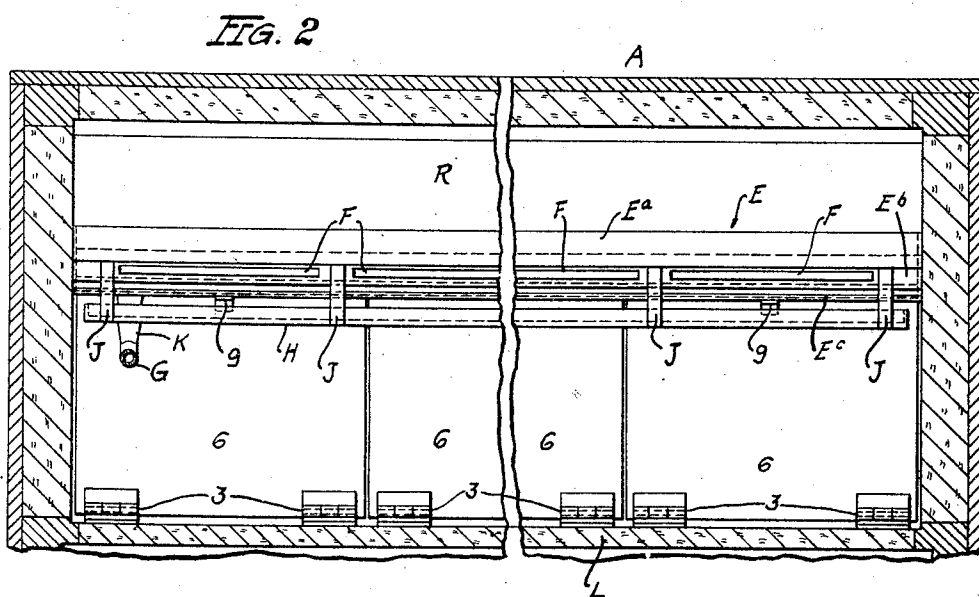
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1,959,646

REFRIGERATOR

Filed June 30, 1930



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1,959,646

REFRIGERATOR

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9 Claims. (Cl. 62—89.6)

This invention relates generally to refrigerators, and more specifically to refrigerating display cases of the type employed in grocery stores, butcher shops, delicatessens, and like establishments where food stuffs are displayed for sale under refrigeration, the predominant object of the invention being to provide an improved refrigerating display case which is so constructed and arranged that fogging of the transparent walls of the display case, when the doors thereof are opened to remove articles of food therefrom, is prevented.

Prior to this invention display cases of the type to which the invention relates were so constructed and arranged that when the doors of the display cases were opened to remove articles of food therefrom relatively warm air from the exterior of the case would rush into the interior of the display case, with the result that the inner faces of the transparent walls of the display case would become fogged. This condition was very objectionable, inasmuch as visibility through the transparent walls of the display cases was destroyed during the fogged condition thereof.

In view of the foregoing, I have devised the display case disclosed herein, which, briefly stated, includes a display rack which is arranged in spaced relation with respect to the transparent front wall of the case. This display rack is so constructed and arranged that it serves as an effective baffle which isolates the portion of the interior of the case to the immediate rear of the transparent front wall from the remaining, major portion of the interior of the case, hence, when the doors of the refrigerator are opened to remove food stuffs from said major portion of the interior of the display case, the warm air which enters the interior of the case is prevented from coming in contact with the transparent walls of the case, with the result that fogging thereof is prevented.

Fig. 1 is a cross-section taken through a display case constructed in accordance with this invention.

Fig. 2 is a section on the staggered line 2—2 of Fig. 1.

In the drawing, wherein is shown for the purpose of illustration, merely, one embodiment of the invention, A designates a display case. The display case A, in so far as its wall structure is concerned, is of the usual and well known construction; that is to say, said display case is provided with the usual insulated walls and an inclined front wall B is formed of a plurality of spaced apart layers of glass or other transparent

material C. The display case A includes also one or more doors D, which provide means of access to the interior of the display case.

Disposed preferably in the upper portion of the display case A is refrigerating means R, which, in so far as this invention is concerned, may be a mechanical refrigerating unit or a suitable container for ice. The refrigerating means R is supported in any suitable manner, as by brackets (not shown), and arranged beneath the means R is a drip pan E which receives any moisture which falls from the refrigerating means. The drip pan is preferably insulated and includes an upstanding rear wall E^a and a forwardly and downwardly inclined bottom wall E^b, said bottom wall, at its forward portion, being provided with a channel E^c which extends longitudinally of the pan E. The drip pan E, as shown clearly in Fig. 2 of the drawing, extends the full length of the interior of the display case, the opposite end walls of said drip pan being secured to the inner faces of the opposite end walls of the case. The bottom wall E^b of the drip pan E is provided with a plurality of apertures F, and the channel E^c is in communication with a drain pipe G which extends from one end of the channel to the exterior of the display case, whereby water which passes into the channel may be drained therefrom.

Suspended from the drip pan E is a second insulated drip pan H, which is supported by suitable brackets J. The drip pan H extends longitudinally of the drip pan E, as shown clearly in Fig. 2, and said drip pan H is disposed immediately beneath and in spaced relation with respect to the apertures F in the bottom wall of the drip pan E. The drip pan H is provided with a drain pipe K, which communicates at its upper end with the interior of said drip pan, and at its lower end with the drain pipe G, whereby water which finds its way into the drip pan H will be drained therefrom.

1 designates a plate which is preferably insulated and is arranged perpendicularly in the upper portion of the interior of the display case. This plate extends from the inner face of one end wall of the case to the inner face of the opposite end wall of said case, and said plate is suspended from the top wall of the case by suitable brackets 2. The plate 1 is arranged in spaced relation with respect to the refrigerating means R, and the top edge of said plate is located downwardly from the lower face of the top wall of the display case to provide a space for passage of air above said plate.

Secured by hinges 3 to the horizontal wall L

of the display case is a display rack 4. The display rack 4 preferably comprises a pair of spaced apart plates 5 and 6, which are maintained in their spaced relationship by means of brackets 7, which are spaced transversely and longitudinally of said display rack. The plate 5 at its lower end is provided with a laterally extended foot portion 8, and when the display rack is in its operative position the upper edge of said plate 5 is located in close proximity to the lower edge of the plate 1. The hinges 3 are secured to the lower portion of the plate 6 and to the horizontal wall L of the display case, and when the display rack is in its operative position the lower edge of said plate 6 is in close proximity to said horizontal wall L. In view of the hinged arrangement of the display rack it is obvious that said display rack may be maintained in the position in which it is shown by full lines in Fig. 1, and also that it may be moved to a substantially horizontal position, as shown by dotted lines in said view. To provide means for maintaining the display rack in its operative position as shown by full lines in Fig. 1, I employ one or more levers 9, each of which is pivoted at 10 to the drip pan E. The levers 9 extend rearwardly so as to present the rear end portions thereof adjacent to the doors C of the display case, and the forward ends of said levers are provided with downturned portions 11 which engage the under side of the plate 6 of the display rack 4.

In the use of the improved display case disclosed herein the levers 9 may be turned about their pivots 10 to move the downturned portions 11 thereof out of engagement with the plate 6 of the display rack 4. The upper end of the display rack may then be moved downwardly until said display rack occupies the horizontal position in which it is shown by dotted lines in Fig. 1. The articles to be displayed on the display rack may then be arranged thereon, after which said display rack may be elevated to the position in which it is shown by full lines in Fig. 1, the levers 9 being moved to the position illustrated in Fig. 1 to maintain said display rack in its operative position.

When the display rack is in its operative position, the interior of the display case A is divided by said display rack into a storage compartment Y and a display compartment Z, a stack of the articles displayed in the display compartment being stored in the storage compartment. When the display case is in use and the doors D thereof are closed, cold air will pass downwardly from the refrigerating means R between the plates 5 and 6 of the display rack, as indicated by arrows in Fig. 1, said air passing around the lower end of the plate 5 of said display rack and moving upwardly through the display compartment and returning to the position of the refrigerating means R through the space above the plate 1. Also, cold air will pass downwardly from the refrigerating means through the apertures F in the drip pan E and will move downwardly into the storage compartment through the space between the drip pans E and H, said air moving upwardly adjacent to the rear wall of the display case as its temperature increases. It is seen, therefore, that there is a circulation of air in each of the compartments Y and Z which is entirely distinct from the circulation of air in the other compartment.

When the doors D of my improved display case are opened to gain access to the storage compartment Y, it is plain that the warmer air which

rushes in will be baffled by the wall provided by the display rack, and because the circulation of air in the display compartment Z is not disturbed by the inrush of warmer air into the storage compartment, there will be no fogging of the transparent wall B by said warmer air.

I claim:

1. A refrigerating display case including a storage compartment and a display compartment, a movable display rack separating said storage compartment and said display compartment, and refrigerating means, said display rack comprising spaced apart portions providing a passageway therebetween for air circulated through said display compartment.

2. A refrigerating display case including a storage compartment and a display compartment, a hinged display rack separating said storage compartment and said display compartment, and refrigerating means, said display rack comprising spaced apart portions providing a passageway therebetween for air circulated through said display compartment.

3. A refrigerator display case including a storage compartment and a display compartment, a hinged display rack separating said storage compartment and said display compartment, said display rack comprising spaced apart portions providing a passageway therebetween for air circulated through said display compartment, refrigerating means, and a plate at the upper end of said display rack for assisting in the control of the air circulated through said display rack.

4. A refrigerator display case including a storage compartment and a display compartment, a hinged display rack separating said storage compartment and said display compartment, said display rack comprising spaced apart portions providing a passageway therebetween for air circulated through said display compartment, refrigerating means, and a plate at the upper end of said display rack for assisting in the control of the air circulated through said display rack, said plate being arranged in spaced relation with respect to the top wall of the display case to provide an air passageway above said plate.

5. A refrigerator display case including a storage compartment and a display compartment, a hinged display rack separating said storage compartment and said display compartment, said display rack comprising spaced apart portions providing a passageway therebetween for air circulated through said display compartment, refrigerating means, a plate at the upper end of said display rack for assisting in the control of the air circulated through said display rack, and means arranged to direct some of the cold air passing from said refrigerating means to the air passageway between said spaced apart portions of said display rack.

6. A refrigerator display case including a storage compartment and a display compartment, a hinged display rack separating said storage compartment and said display compartment, said display rack comprising spaced apart portions providing a passageway therebetween for air circulated through said display compartment, refrigerating means, a plate at the upper end of said display rack for assisting in the control of the air circulated through said display rack, and means comprising a drip pan located beneath said refrigerating means arranged to direct some of the cold air passing from said refrigerating means

to the air passageway between said spaced apart portions of said display rack.

7. A refrigerator display case including a storage compartment and a display compartment, a hinged display rack separating said storage compartment and said display compartment, said display rack comprising spaced apart portions providing a passageway therebetween for air circulated through said display compartment, refrigerating means, a plate at the upper end of said display rack for assisting in the control of the air circulated through said display rack, and means comprising a drip pan located beneath said refrigerating means arranged to direct some of the cold air passing from said refrigerating means to the air passageway between said spaced apart portions of said display rack, said drip pan being provided with an aperture formed therethrough through which cold air passes from the refrigerating means to said storage compartment.

8. A refrigerator display case including a storage compartment and a display compartment, a hinged display rack separating said storage compartment and said display compartment, said display rack comprising spaced apart portions providing a passageway therebetween for air circulated through said display compartment, refrigerating means, a plate at the upper end of said display rack for assisting in the control of the air circulated through said display rack, means

comprising a drip pan located beneath said refrigerating means arranged to direct some of the cold air passing from said refrigerating means to the air passageway between said spaced apart portions of said display rack, said drip pan being provided with an aperture formed therethrough through which cold air passes from the refrigerating means to said storage compartment, and a second drip pan disposed beneath said aperture in the first mentioned drip pan.

9. A refrigerating display case including a storage compartment having an opening in a wall thereof for permitting access to the interior of the refrigerating display case, a closure for said opening, a display compartment provided with a transparent wall portion, said opening of the storage compartment and said transparent wall portion of the display compartment being in direct opposed relation, refrigerating means, and a hinged baffle adapted to receive articles being displayed within the display compartment, said baffle being interposed between said opening and said transparent wall portion in a manner to prevent substantially all of the warm air which enters the case through said opening when the closure thereof is removed from passing into said display compartment.

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60	135
65	140
70	145
75	150