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REFRIGERATOR DISPLAY CASE

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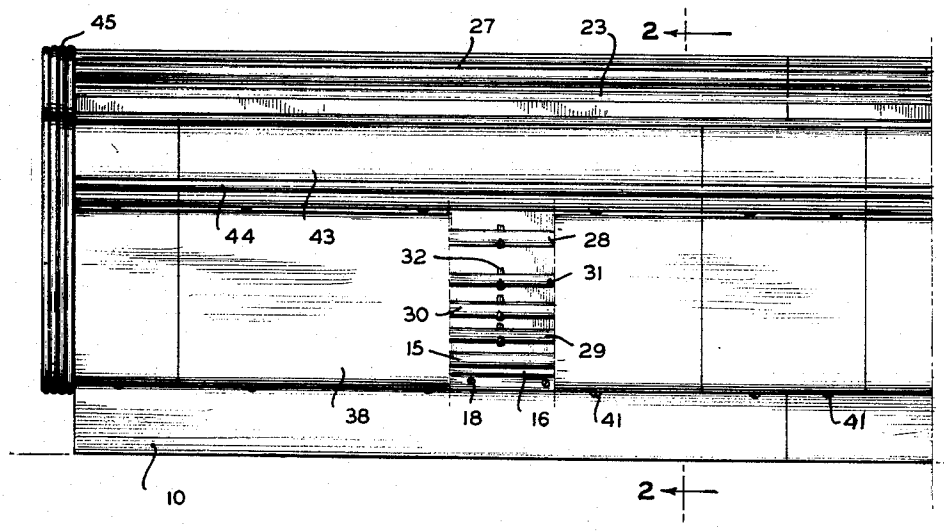


FIG. 1

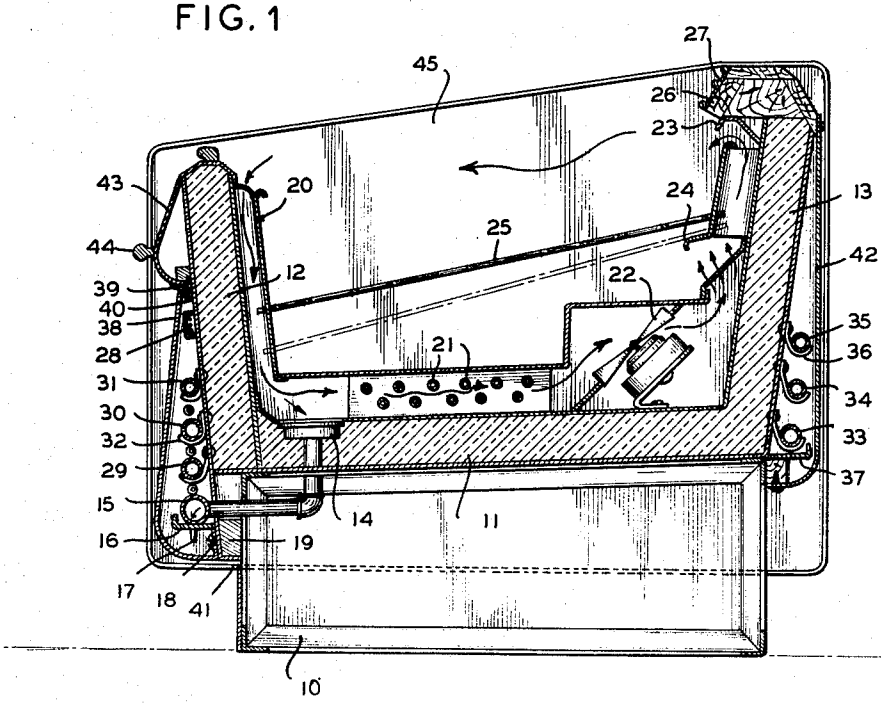


FIG. 2

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REFRIGERATOR DISPLAY CASE

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This invention relates to foods and other commodities perishable and otherwise the temperature of which it is sometimes desirable to modify, to the care and preservation thereof, and to equipment by which such is accomplished.

The invention relates specifically to the refrigeration and other temperature modification of food and other commodities and to the equipment including, for example, refrigerator cases or cabinets by means of which the refrigeration or temperature modification is accomplished.

In places where produce and other perishable foods and the like are displayed for the public to observe including in self-service stores and the like, installation of refrigeration equipment has presented a problem frequently requiring modification of the floor, walls and other parts of the building making the installation difficult, expensive, requiring substantial time to accomplish and creating numerous other problems including in the running of pipes and the like.

It is an object of the invention to overcome the difficulties enumerated and to provide a refrigerator or display case which can be easily, quickly and inexpensively installed without the necessity of tearing up the floor, walls or other parts of the building and which can be readily moved without modifying the structure of the building.

Another object of the invention is to provide temperature modification structure such as a refrigerated case in which the service lines are readily accessible above the floor although concealed or covered by readily removable and replaceable panels.

A further object of the invention is to provide an open top display case of small height in which the refrigerating compartment is insulated by coils within the same along the bottom wall and with service lines suspended on hangers at an elevated location along the front and rear of the case and with removable panels affording access to such lines, the entire structure being compactly contained in a relatively small area.

Other objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawing wherein:

Fig. 1 is a fragmentary front elevational view illustrating one application of the invention; and

Fig. 2, a section on the line 2—2 of Fig. 1.

Briefly stated, a container which may be open at its top or otherwise is provided having inclined front and rear insulated walls and a bottom wall inclined slightly downwardly from rear to front.

Within the open top display case along the bottom are cooling coils beneath a shell which provides a hollow space along the bottom and at the front and back of the same and with a fan also beneath said shell for producing air circulation within the case. A drain is provided at the lower front portion of the case and service lines for the refrigerating coil is provided for supplying refrigerant and returning refrigerant vapor to a conventional compressor-condenser type of refrigeration system.

A discharge line for water discharged through the drain

and the service lines to the coils are suspended on hooks along the front and rear inclined portions of the case and are covered by removable panels.

Upon the base **10** is mounted a container the temperature of which is adapted to be modified. For purposes of illustration a refrigerating display case is disclosed, such case having a bottom **11**, front **12** and rear **13** wall structure at least a portion of which is inclined so that it extends outwardly beyond its lower edge portion, all provided with insulation. The bottom is inclined so that its forward portion is slightly lower than its rear and such lower portion is provided with a drain **14** which extends downwardly and forwardly to the exterior of the cabinet and joins a common drain line **15** which may be employed for draining a number of cases.

The drain line **15** is held by means of a drip pan **16** having a discharge **17** beneath the same. The drip pan **16** is mounted by means of screws **18** on a supporting strip **19**. Frost accumulating on the exterior of the drain line **15** and melting will flow into the pan **16** from which it can be discharged. Condensation through the drain from the drip pan may be discharged in the usual manner.

Within the refrigerator is provided a shell or liner **20** providing a space for air flow at the front, bottom and rear within the cabinet and beneath which in the bottom are mounted refrigerator coils **21** and an air circulating fan **22** for causing the circulation of air so that it will move down the exterior of the shell at the front, rearwardly over the coils and up the back of the shell and be discharged. The circulated air will strike upper and lower baffles **23** and **24** and be deflected onto the contents of the upper and lower portions of the case.

The liner may be in the form of a removable metal pan and may contain a wire shelf **25** which may be adjusted to two or more positions. Also, if desired, electrical heating wires **26** may be provided adjacent the top of the rear wall of the cabinet for preventing condensation on any desired area such as, for example, that containing an aluminum molding **27** adapted to hold a card for indicia, price, or the like.

Service lines for the electrical wires **26** may extend from a conduit **28** on the exterior of the front of the cabinet. Between the conduit **28** and the common drain line **15** are additional service lines **29**, **30** and **31** at the front supported by hangers **32** and similar service lines **33**, **34**, **35** at the back supported by hangers **36**. Beneath the service lines **33**, **34** and **35** is mounted a drip pan **37** similar to the pan **16** at the front of the case.

A protective cover **38** has its upper end provided with a hook **39** which engages cooperating hook means **40** mounted on the front of the case, the lower end of the panel **38** being secured in place frictionally due to the flexibility of the metal or by means of screw or other fastener **41** to the supporting strip **19**. By merely removing the fastener **41** the panels may be removed to afford access to the service lines along the front of the refrigerator. In like manner a similar panel **42** may be provided at the rear of the cabinet and mounted and fastened in a similar manner. An outwardly bulging metal panel **43** is applied to the upper portion of the metal cabinet and to it is attached a guard rail **44**. The display case may be of any desired length and for such purpose ends **45** may be spaced a desired distance apart and connected by the front, bottom and rear sides of the cabinet.

It will be apparent from the foregoing that a simple practical way is provided of installing a refrigerating case or the like without injuring or modifying the structure in which it is installed and with the working parts readily accessible at all times.

It will be obvious to those skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the inven-

tion is not limited by that which is illustrated in the drawing and described in the specification, but only as indicated in the accompanying claims.

What is claimed is:

1. A relatively low open top refrigerated display case comprising a bottom and upright wall structure at least a portion of which is inclined outwardly, a liner within said case providing a space for the circulation of air, heat exchange coils located between said liner and said case, said liner having a chamber forming enlargement for cooling the interior of said display case, a fan in said chamber for producing air circulation, baffles for deflecting air downwardly into said case, a drain from the lower portion of said case to permit condensation on said coils to be discharged, means for supporting said case upon and above a base, service lines for said drain and for coils disposed one above the other along the outer surface of said inclined wall portion, hangers supporting said service lines on the inclined wall portion of said case, a drainage trough beneath said service lines, panel means along said inclined wall portion for covering said service lines, a mounting strip beneath the edge of said case adjacent said service lines, said case having hook means above said service lines, said panel having a hook for engagement with said hook means so that said panel may be supported to conceal said service lines with the lower sheet of said panel extended inwardly for frictional engagement with said strip.

2. Structure the temperature of which is adapted to be modified including upright wall structure, a heat exchange unit for modifying the temperature of said structure, means for supporting said structure on a base, service lines suspended on said upright wall structure at an elevation above said base, a panel for covering said service lines, said panel having its upper edge bent inwardly to provide a hook, cooperative hook means on the exterior of said wall structure, said panel having its lower edge extended inwardly in a manner to engage a fixed part of the structure whereby such panel may be readily removed to afford access and easily reapplied.

3. A refrigerated case comprising an insulated cabinet having a bottom wall and upright walls, at least one of said upright walls being inclined outwardly, a liner within said cabinet providing space for the circulation of air, heat exchange coils located between said liner and said case for cooling the interior of said case, a drain from the lower portion of said case to permit the discharge of condensation on said coils, means for supporting said case upon and above a base, service lines for said drain and for said coils disposed one above the other along the outer surface of said inclined wall, means supporting said service lines along said wall, panel means along said wall and covering said service lines, said case having engageable means above said service lines, said panel means having cooperating means for engagement with said engageable means so that said panel may be supported to conceal said service lines.

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