Nov. 11, 1941. L. A. PHILIPP 2,262,591

REFRIGERATING APPARATUS

Filed May 31, 1940

Fig. 1.

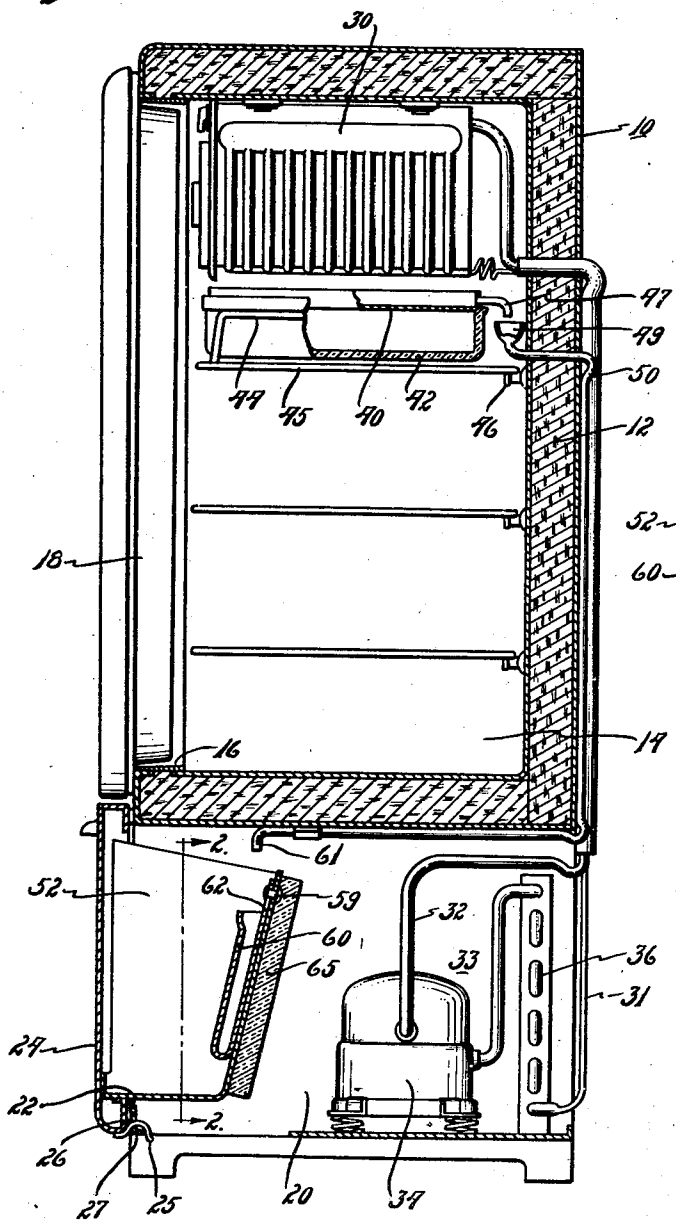
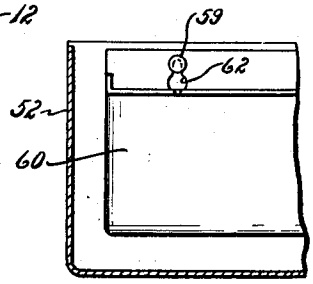


Fig. 2.



INVENTOR.
LAWRENCE A. PHILIPP
BY Ralph E. Baker
ATTORNEY.

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REFRIGERATING APPARATUS

Lawrence A. Philipp, Detroit, Mich., assignor to Nash-Kelvinator Corporation, Detroit, Mich., a corporation of Maryland

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5 Claims. (Cl. 62—89)

The present invention pertains to a refrigerating apparatus.

An object of the present invention is to provide an improved arrangement for disposing of the moisture from the evaporating element of a refrigerating system.

Another object of the present invention is to arrange for the drainage of the drip moisture from a collecting tray to a vessel located in a second compartment provided in a cabinet whereby the arrangement is such as not to interfere with a ready withdrawal of the tray or the ordinary intended use of the second compartment.

The invention itself, however, both as to its organization, and its method of operation together with additional objects and advantages thereof, will best be understood from the following description of specific embodiments when read in conjunction with the accompanying drawing in which:

Fig. 1 is a central vertical cross-sectional view of a refrigerator cabinet showing the invention applied; and

Fig. 2 is a fragmentary cross-sectional view taken along line 2—2 of Fig. 1.

In the drawing there is shown a cabinet 10 having insulated top, bottom and side walls 12 enclosing a food storage compartment 14. Access to compartment 14 is through opening 16, provided in the front wall of the cabinet, which is closed by a swingably mounted closure member 18. A second compartment 20 is provided beneath compartment 16 and insulated therefrom. The compartment 20 has an opening 22 in the front wall of the cabinet and is closed by closure member 24 that is swingably mounted by arcuate plates 25 projecting through and operative in slots 26 formed in rail 27 of the cabinet 10.

Secured to the top wall of compartment 14 is an evaporator 30 connected by conduits 31 and 32 to a hermetically sealed motor-compressor and condensing element 33 positioned in compartment 20. The heat laden refrigerant is withdrawn from the evaporator 30 through conduit 32 into the motor-compressor unit 34 where it is compressed and from whence it is delivered into condenser 36 where the refrigerant is cooled and liquified to be conducted through the small diameter metering tube 31 to the evaporator 30.

In the operation of the refrigerating system for the cooling of compartment 14 moisture in the food storage compartment 14 tends to collect and freeze to the sides of the evaporator. In some types of evaporator the defrosting is accomplished automatically at periodical intervals, whereas in other types the defrosting is accomplished by a manual setting of the thermostatic controls as is well understood in the art. The present invention is adapted to be used with either type of evaporator.

Positioned beneath the evaporator 30 to catch the drip therefrom during defrosting is a shallow tray 40 which is supported on and serves as a cover for a deep tray 42. The tray 42 is retractably supported on rails 44 of shelf 45 supported on lugs 46 projecting outwardly from the walls of compartment 14. Secured to the rear wall of tray 40 so as to drain the contents of the tray is one end of tube 47, the other end terminating over and above a funnel shaped opening 49 of tube 50.

Projecting into compartment 20 and affixed to closure member 24 to become a part thereof is an open receptacle or bin 52 used for the storage of foods which can be safely kept at relatively high temperature as is found in the machine compartment 20. Suspended from studs 59 secured to a wall of the bin 52 is an open container 60 adapted to receive the water collected in tray 40 and conveyed through tube 50. End 61 of tube 50 terminates over and above the bin 52 positioned so that the water will flow directly into the container 60. The container 60 is provided with bayonet slots 62 for receiving the studs 59 permitting a ready removal or replacement of the container 60.

It will be noted that the arrangement of the drainage conduit is such that it does not interfere with the ordinary use of the refrigerator. That is, the trays 42 and 40 are readily retractable on its guide rails 44, or may be bodily removed from the refrigerator without necessitating any attention for the breaking of the drainage connection. The drainage connection of tray 40 with tube 50 being remade by placing the tray in its normal position beneath the evaporator. Similarly the free or normal use of the bin 52 is not interfered with by any direct conduit connection requiring the user's attention.

To prevent the rear wall of the bin 52 from becoming excessively heated due to its proximate position near the compressor condenser unit 27 and thereby heat up the food stored in the bin 52 a pad of heat insulation 65 is affixed to the exterior surface of the rear wall of bin 52.

While I have illustrated and described the preferred form of my invention, I do not wish to limit myself to the precise details as shown but wish to avail myself of such variations and

modifications as may come within the scope of the appended claims.

I claim:

1. Refrigerating apparatus comprising, a cabinet having a food compartment and a machine compartment, a movable bin for the storage of vegetables positioned in said machine compartment, a removable drip receptacle carried by said movable bin, a refrigerant evaporating element positioned in said food compartment, and means for collecting and conducting the drip moisture from said element to said receptacle.

2. Refrigerating apparatus comprising, a cabinet having a food compartment and a machine compartment, a refrigerant evaporating element positioned in said food compartment, a refrigerant condensing element positioned in said machine compartment, a movable vegetable bin also positioned in said machine compartment but insulated from said condensing element, a removable drip receptacle carried by said movable bin, and means for collecting and conducting the drip moisture from said evaporating element to said drip receptacle.

3. Refrigerating apparatus comprising, a cabinet having a food compartment and a machine compartment, a refrigerant evaporating element positioned in said food compartment, a refrigerant condensing element positioned in said machine compartment, a movable bin also positioned in said machine compartment, a removable drip receptacle positioned in said machine compartment where it is accessible upon movement of said bin, and means for conducting the drip moisture from said evaporating element to said receptacle.

4. Refrigerating apparatus comprising a cabinet having a compartment, a refrigerant evaporating element for cooling said compartment, a condenser element associated with said evaporator element, a bin within said cabinet exterior of said compartment, a storage receptacle for foods to be refrigerated, a drip tray for collecting moisture from the evaporating element to prevent said moisture from entering said receptacle and means for conveying moisture from said tray to the vicinity of said bin.

5. Refrigerating apparatus comprising a cabinet having a compartment and a bin located exterior of said compartment, a refrigerant evaporating element for cooling said compartment, a condenser element associated with said evaporator element, a storage receptacle for foods to be refrigerated, a tray cover for the receptacle for collecting moisture from the evaporating element, and means for conducting said moisture from said tray cover to a point within said bin.

LAWRENCE A. PHILIPP.