

July 7, 1959

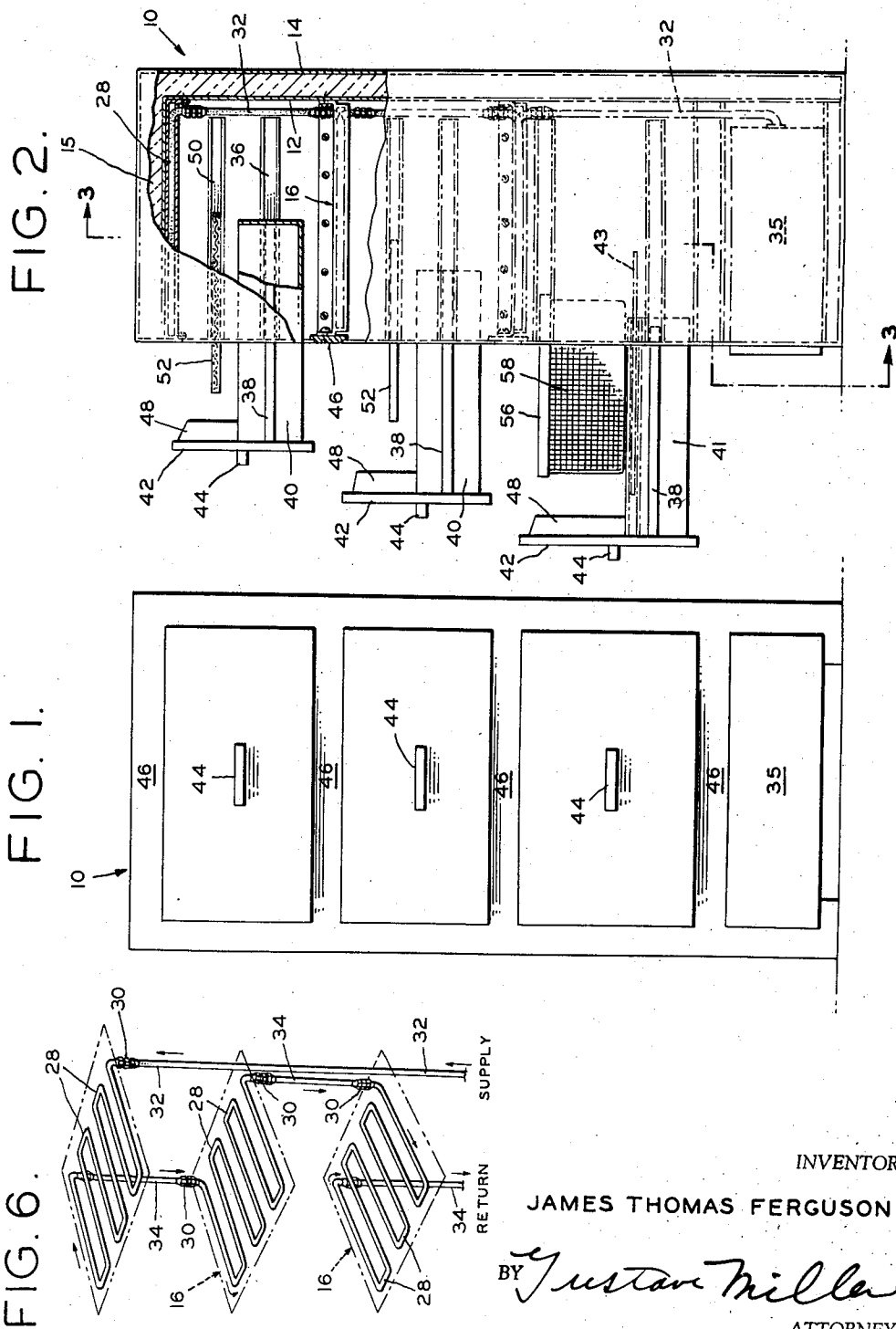
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2,893,805

DRAWER-TYPE REFRIGERATOR DEVICE

Filed July 30, 1956

2 Sheets-Sheet 1



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FIG. 4.

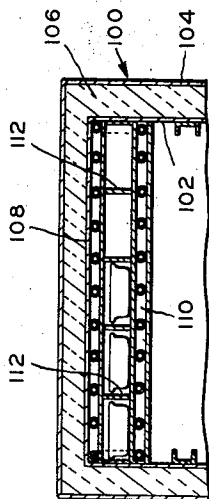


FIG. 5.

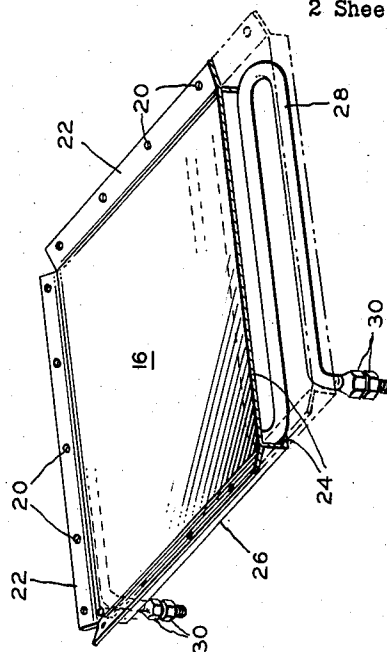
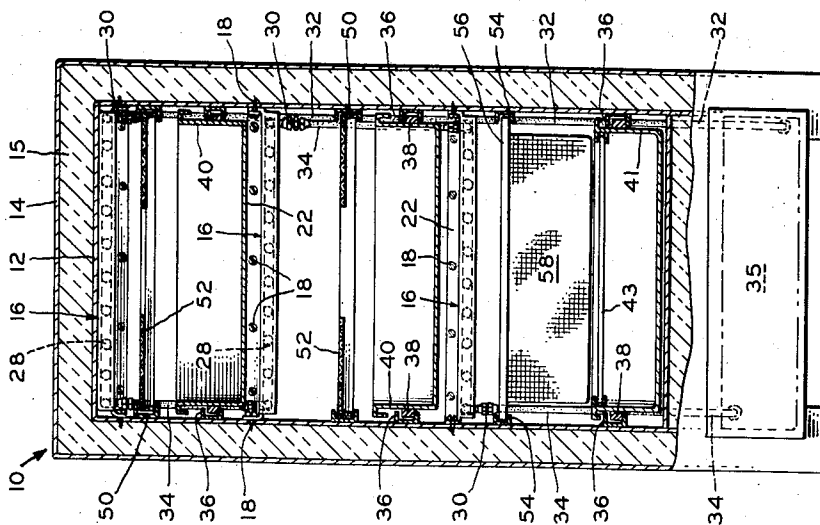


FIG. 3.



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DRAWER-TYPE REFRIGERATOR DEVICE

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2 Claims. (Cl. 312—214)

This invention relates to a refrigerator device, and it particularly relates to a refrigerator device having a plurality of separate refrigerator compartments.

In ordinary type refrigerators having a single door which closes the entire freezing compartment, every time the door is opened, warm air rushes in and depletes the cold in the entire device. Therefore, after the door is closed, heat has to be removed from the entire compartment. If the door is constantly opened and closed, a great amount of electrical energy must be expended to maintain the atmosphere in the refrigerator sufficiently cold.

Furthermore, in the ordinary single-door refrigerator having a single compartment, it is necessary to divide the compartment up into various sections by means of wire racks and the like. Since items must be stored on these racks, one against the other, it is generally difficult to reach items which are stored in the rear, and it is often necessary to remove many of the items in the front before they can be reached.

In addition, the single-door type refrigerator has a heavy large door pivoted on hinges at one side of the refrigerator. This hinged door requires a corresponding space at the side of the refrigerator to accommodate it when it is open.

Another serious disadvantage of these prior single-door type refrigerators is the constant tendency of the odors from various different kinds of foods to mix with each other.

It is, therefore, one object of the present invention to provide a refrigerator device wherein the arrangement is such that when it is opened only a portion thereof is open to the outside air.

Another object of the present invention is to provide a refrigerator device wherein all portions thereof are easily accessible.

Another object of the present invention is to provide a refrigerator device wherein the mixing of odors from various foods is kept to a minimum.

Another object of the present invention is to provide a refrigerator device which can be conveniently used in a small space where additional accommodation at the side is not required for opening the door.

Other objects of the present invention are to provide an improved refrigerator device, of the character described, that is easily and economically produced, which is sturdy in construction, and which is highly efficient in operation.

With the above and related objects in view, this invention consists in the details of construction and combination of parts, as will be more fully understood from the following description, when read in conjunction with the accompanying drawings in which:

Fig. 1 is a front elevational view of a device embodying the present invention.

Fig. 2 is a side view, partly in elevation and partly in section, of the device of Fig. 1.

Fig. 3 is a view, partly in section and partly in eleva-

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tion, of the device of Fig. 1 taken on line 3—3 of Fig. 2.

Fig. 4 is a fragmentary sectional view of an alternative embodiment of the invention, showing it applied to a freezer unit.

Fig. 5 is a perspective view of a typical cooling unit used in this invention.

Fig. 6 is a diagrammatic view, in perspective, of the freezing coil and freezing unit hook-up.

Referring now in greater detail to the drawings wherein similar reference characters refer to similar parts, there is shown a housing 10 comprising an inner wall 12 and outer wall 14 between which is provided insulation 15, such as glass wool or the like. The interior of the housing 10 is divided into several vertical compartments by means of refrigerator partitions 16, each of which is fixed to the inner wall 12 of the housing as by screws 18 or the like, which pass through holes 20 in semi-flexible, baffle-plates or flanges 22 hingedly extending from the edges of the partitions.

Each of the partitions 16 is, itself, made up of a generally flat, hollow, rectangular or square casing; the shape of the casing depending on the shape of the interior of the housing. Each of these casings comprises a pair of upper and lower sheets 24, constructed of aluminum or the like, and connected to each other by side walls 26 of the same material.

Positioned within each casing 16 is a coil unit 28 consisting of flexible tubing coiled back and forth the width of the casing. The tubing is preferably flexible to permit bending in any desired direction to facilitate hooking up of the separate units. This hook-up between each unit 28 takes place by means of releasable coupling members 30, of the threaded type, such as are in common use. The units are connected to each other, through these coupling members, by means of a supply line 32 and return lines 34. The supply line leads from a pressurized source of coolant provided at 35, which circulates through the tubing and then returns to the source through the return lines. It is then re-cycled back through the supply line in a continuous cooling process. During this re-cycling of the cooling fluid through the tubing, the units in each casing act to cool the compartments therebelow. The baffles 22 on each casing act, at the same time, to substantially seal off each compartment from the other.

On opposite sides of the inner wall 12 of the housing are provided guide rails 36, at least one pair of such oppositely-positioned guide rails 36 being provided in each compartment. These guide rails 36 are adapted to slidably support lateral flanges 38 on the sides of inwardly-slidable drawers 40 and 41, drawer 41 being a hydrator drawer with a slidable glass cover 43. When hydrator drawer 41 is closed glass cover 43 automatically closes. Each drawer has a front wall 42 of substantially higher dimensions. These front walls 42 are adapted to close the open front of each compartment of the housing 10 when the drawers are retracted thereinto. Each front wall 42 is provided with a handle 44, and each of these handles is preferably of the spring-lock type which automatically lock against the housing frame 46 surrounding the open front of each compartment. A side flange 48 at each side of the front wall 42 of each drawer acts to seal off the individual compartment when the drawers are closed.

Provided in each of the two upper compartments shown, above the first pair of rails 36, are a second pair of rails 50 which are adapted to slidably receive a slidable wire shelf 52. In the bottom compartment, which is made larger, a pair of rails 54 are spaced a greater distance above the rails 36 in order to accommodate the flange 56 of a wire basket 58.

The above arrangement of two smaller, upper compartments with wire shelves and a larger, lower compart-

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ment with a wire basket is the preferable arrangement; however, the relative dimensions, as well as the number of compartments, may be varied as desired.

If it is desired to provide a freezing compartment instead of merely a refrigerator compartment, two refrigerator partitions, one above and one below, are provided for the compartment. This is indicated in Fig. 4 where the housing 100, having inner and outer walls 102 and 104; with insulation 106 therebetween, is provided on the interior thereof with upper and lower refrigerator partitions 108 and 110; each of these partitions being similar in construction to those previously described above. Partitions 112 are, if desired, provided within the freezing compartment to make a plurality of horizontally-arranged freezing compartments therein.

Although this invention has been described in considerable detail, such description is intended as being illustrative rather than limiting, since the invention may be variously embodied, and the scope of the invention is to be determined as claimed.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

1. A refrigerator cabinet device comprising an insulated housing having a plurality of vertically arranged refrigerator compartments, each compartment being defined by the side and rear walls of said housing and an upper and lower refrigerator partition, there being an opening in the front wall of said housing, each refrigerator partition comprising a hollow casing having upper and lower spaced apart walls between which a refrigera-

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tor coil may extend, two pairs of oppositely disposed supporting rails in one of said compartments, one pair of rails being arranged vertically above the other pair within the compartment, a drawer extendable into the compartment having oppositely disposed flanges slidably received on the lower pair of said pair of rails, the drawer having opposite side walls and a rear wall extending to at least the height of said lower pair of rails but substantially less than the height of the upper pair of rails and a front insulating wall extending above and below the edges of the compartment opening in the front wall of the housing to thereby seal the compartment when in closed position, and a flanged foraminated support member slidably received on the upper pair of rails within the compartment.

2. The device of claim 1, said foraminated support member, in one compartment, being a dependent wire basket.

References Cited in the file of this patent

UNITED STATES PATENTS

1,975,046	Larkin	Sept. 25, 1934
2,255,459	Vretman	Sept. 7, 1941
2,281,398	Walley	Apr. 28, 1942
2,399,967	West	May 7, 1946
2,449,101	Barley	Sept. 14, 1948
2,769,676	Larsen et al.	Nov. 6, 1956
2,816,809	Miller et al.	Dec. 17, 1957