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REFRIGERATED DISPLAY CABINET AND LID STRUCTURE

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Fig. 1.

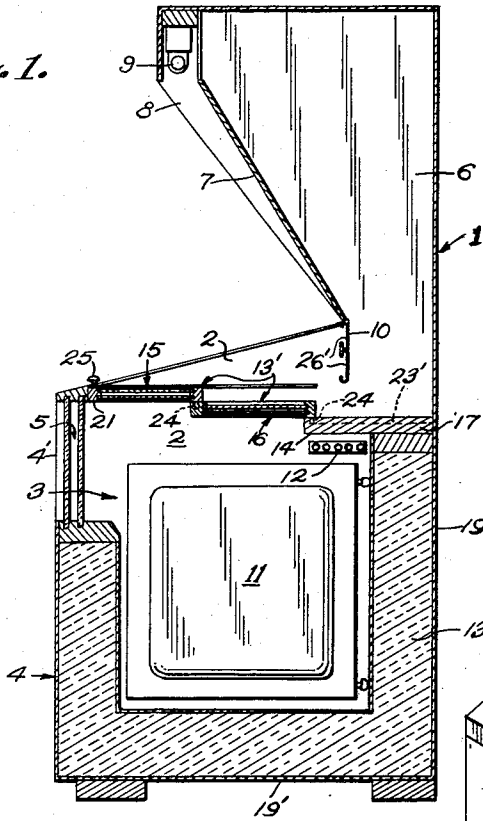


Fig. 2.

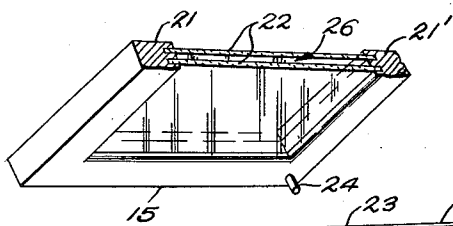
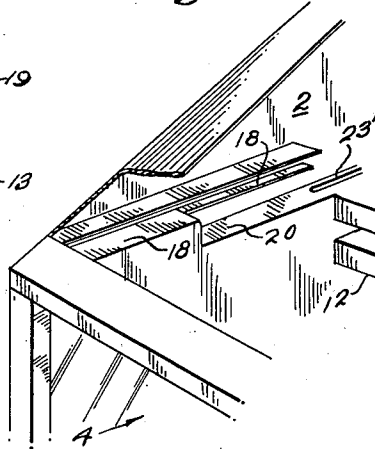
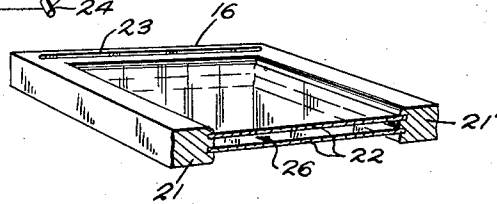


Fig. 3.



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REFRIGERATED DISPLAY CABINET AND LID STRUCTURE

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4 Claims. (Cl. 312—138)

The present invention relates to food display and storage cases or cabinets, and more especially to display and storage cabinets of the type known as "Self-Serve" refrigerating cabinets wherein the purchaser may make a selection of food from the foods and packaged stock on display therein and without aid from store personnel, and so designed that two or more persons may withdraw their selected foods simultaneously, due to a plurality of foldable sliding lids or closures when in open position.

A still further object of this invention is to provide an improved type of lid or closure, composed of interconnected sections slidable over one another in a direction transversely of the length of the cabinet, thereby when open, exposing the entire length of the display area of the cabinet as well as the entire width thereof to simultaneously afford accessibility to one or more prospective purchasers, each section of the closure being provided with transparent panels to permit viewing of the contents of the cabinet, even when in closed position.

An important object of this invention is the provision of a refrigerated cooler cabinet comprising a sectional lid or closure, the sections being slidable in a direction transversely of the length of said cabinet, one over the other to open and substantially concealed position to afford viewing of the contents throughout the interior area of the cabinet, and said lids being detachably interconnected, and in a manner such that the movement of one lid section imparts predetermined movement to an adjacent lid section.

A further important object of this invention is the provision of a freezer or cooler of the chest type of cabinet comprising a slidable lid or closure structure adapted to afford a view of the contents whether in open or closed position, and an end anchored coil horizontally disposed above the prevalent divider-refrigerating plate coils for maintaining a cold air level above the latter coils.

Further objects of the invention will become apparent as the description proceeds, and the features of novelty will be pointed out in particularity in the appended claims.

The invention will be understood more readily by reference to the accompanying drawing, which illustrates an exemplary embodiment of the improved cabinet of this invention, and in which:

Fig. 1 is a vertical transverse sectional view of my improved refrigerating food commodity display cabinet.

Fig. 2 is a fragmentary perspective view of Fig. 1 and the sectional closure supporting track structure.

Fig. 3 is a fragmentary perspective disassembled view of certain of the closure lid sections.

The illustrated embodiment of the present invention is shown in connection with a refrigerated or cooling cabinet 1 for the display and sale of food commodities, and having ends 2, defining a storage compartment 3 provided with a transparent double wall section 4', comprising the upper portion of the wall 4 and air space 5, this section being at the front of the cabinet to enable a clear viewing of the contents of the compartment 3 through the front of the cabinet. The cabinet is provided with an upper end portion 6, which forms a mounting for a reflecting display mirror 7, which is inclined at an angle to effect an efficient display of all of the foods at eye level, which will attract customers from a distance, thus making the contents of the compartment 3 visible at a high level, and from a distance with respect to the cabinet, and in this manner attracting prospective purchasers. The cabinet 1 is provided at each end with a projecting upper end portion 8, which projects forwardly of the mirror 7,

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and on which is mounted a source of illumination 9 which illuminates the mirror 7, and also the interior of the compartment, thereby enhancing the visibility of the commodities in the compartment 3. Said end portions 6 and 8 constitute continuations of end portion 2. A rack 10 is vertically disposed below the mirror 7, for the reception of identifying price and commodity-indicating cards or the like. The compartment 3 is refrigerated by a plurality of large vertically disposed laterally spaced plate coils 11 and a horizontally disposed auxiliary coil 12 positioned at the top of the compartment 3 at the rear and extending the length thereof, with its ends suitably and supportingly connected to the ends 2, and adapted to maintain a cold air level above the plate coils 11 without obstructing the view of the contents of the cabinet. The front wall 4, back wall 19, bottom 19', and ends 2 of the cabinet 1 are provided with insulation 13 surrounding the compartment 3, except the upper portion of the front wall which is provided with transparent panels 4' having an intervening insulating air space 5.

The top of the compartment 3 is provided with a compound lid closure 13' that is mounted in tracks 18, 20, and in the supports 14 adapted to support the stationary lid section 17. Said tracks including the supports 14 are suitably mounted on the inner surface of end walls 2 of the compartment 3.

The closure 13' is composed of lid sections 15, 16, and 17. The front section 15 is adapted to slide over the second section 16, both of these sliding over the third section 17 which is stationary. Said sections 15 and 16 are of a corresponding width, but section 17 may, if desired, be of a different width. The front section 15 is slidable in the tracks 18 which terminate short of the back wall 19 at approximately the front edge of the back section 17, as do the tracks 20 for the middle or second section 16. Each of the lid sections 15 and 16 comprises a metal frame 21 in which are suitably mounted a pair of vertically spaced transparent panels 22 forming an insulating air space 26, but section 17 may, if desired, be solid. The end frame members of the second section 16 are provided with U-shaped grooves 23 which terminate short of the front and rear edges thereof and in which lugs 24 suitably mounted in the rear corners of frame 21 of section 15, extend downwardly therein. In order to open and close the closure 13' handle means 25 projects upwardly from the front edge of section 15.

Corresponding to the front lid section 15, lugs 24 depend from the rear portion of frame 21 of the lid section 16 into, in the present instance, angle iron tracks 23' at opposite ends of the stationary lid section 17. This construction not only aids in conjunction with tracks 18, 20, in guiding the lid sections during their movement from open to closed position, but when the lid section 15 is moved in lid opening direction the lugs 24 engage the rear ends of slots 23 to position sections 15 and 16 in superimposed relation with respect to section 17, thereby effecting the complete opening of the closure 13'. The reverse movement of said lid sections effects closing of said closure, during the closing movement of said sections, when the lugs 24 of section 15 engage the front ends of the U-shaped slots 23, section 16 is picked up and moves forward so that when the section 15 has reached its limit of movement in closing direction the lugs 24 of sections 15 and 16 will be in engagement with the stop ends of their respective tracks 23 and 23' and the rear ends of the frame 21 of sections 15 and 16 will be maintained in overlying relation with the front ends of the respective underlying sections 16 and 17.

The vertical rack 10 formed with slots 26' adapted to receive indicia bearing cards is suitably connected to opposite ends 2 adjacent the lower end of mirror 7 sufficiently above the upper closure section 15 to permit the removal for cleaning or otherwise of the closure sections when in open or superimposed position. If desired, said rack 10 may be removably connected to said ends 2. It will be further noted that when the closure sections are in open position they are substantially concealed from view by said rack and permit full view of the contents of the cabinet. Also, by virtue of the transparent panel sections the contents of the cabinet are visible even when the closure is completely closed.

From the above it will be apparent that I have provided a freezer or cooling chest-type display cabinet so insulated and having refrigerating means for not only maintaining the contents at a proper frozen or cooling state, but an additional refrigerating means adapted to effect the maintenance of a cold air level above said contents, and a transparent foldable closure adapted when in open position to be substantially concealed, and when in closed position designed to form an insulating means and at the same time permitting a view of the contents, and additional means surmounting said cabinet for rendering the contents clearly visible at a substantial distance from the cabinet, said cabinet comprising few parts and being not only manufacturable at a reasonable cost, but at the same time presenting a pleasing appearance, and expeditiously adaptable for the purposes intended.

Although in practice it has been found that the form of the invention illustrated in the accompanying drawing and referred to in the above description as the preferred embodiment is the most efficient and practical, yet realizing that conditions concurrent with the adoption of my invention will necessarily vary, it is well to emphasize that various minor changes in details of construction, proportion and arrangement of parts, may be resorted to within the scope of the appended claims without departing from or sacrificing any of the principles of this invention.

Having thus described the invention what I desire protected by Letters Patent is as set forth in the following claims:

1. In a cabinet for storing and dispensing frozen food commodities comprising a freezing compartment for receiving the commodities and having a front wall, a rear wall, and end walls, with main and auxiliary refrigerating means in the compartment, the improvements which comprise stepped tracks mounted on the inside of each end wall of the compartment and extending from the front of the compartment rearwardly thereof, a plurality of lid sections slidably mounted in the tracks, a coacting stationary lid section constituting the rear section, all lid sections extending the length of the compartment, each section being stepped downwardly relative to each successive section from front to rear of the compartment, and means slidably interconnecting the successive slidable lid sections whereby predetermined movement of one lid section above its adjacent section imparts corresponding movement to an adjacent section, the slidable sections being slidable one above the other and simultaneously together over the stationary section and providing, when open, access to all parts of the compartment.

2. In a cabinet for storing and dispensing refrigerated food commodities having a freezing compartment for receiving the commodities having a front wall, a rear wall, and end walls, the improvements which comprise stepped tracks mounted on the inside of each end wall of the compartment and extending in downwardly stepped relation from the front of the compartment rearwardly thereof, first and second slidable lid sections mounted on the track, a third stationary lid mounted on the cabinet rearwardly of the slidable lids, and means slidably interconnecting the first and second lids, the first lid being slidable over the second lid and when covering the second lid, the connecting means between the first and second lids moving the second lid with the covering first lid to open the compartment from front to

rear and from end to end simultaneously, thereby enabling access to all parts of the compartment, closing movement of the first lid through a fixed distance imparting closing movement to the second lid, the second lid reaching the forward extremity of its track and its closing position substantially coincidentally with the first lid reaching its closing position.

3. In a cabinet for storing and dispensing food commodities, the improvements which comprise track means mounted on the inside of each end wall of the compartment and extending in downwardly stepped relation from the front of the compartment rearwardly thereof, first and second slidable lid sections mounted on the tracks, a third lid section stationarily mounted on the cabinet rearwardly of the slidable lids, the said track means terminating short of the stationary lid, and means detachably interconnecting the sections, the first section being slidable over the second section, and when covering the second section, the connecting means between the first and second sections moving the second section together with the first section into superimposed position over the stationary third section, thereby opening the compartment from front to rear and from end to end simultaneously, and enabling access to all parts of the compartment, the termination of the track means short of the stationary section enabling the sections to be lifted from the compartment when they are in superimposed and open position.

4. In a cabinet for storing and dispensing food commodities, and having a freezing compartment for receiving the commodities, the improvements which consist in closure means for the compartment mounted in the cabinet and comprising a plurality of interconnected slidable lids extending the entire length of the compartment, the said lids being successively downwardly stepped from front to rear of the compartment, a forward lid being spaced vertically higher than an adjacent rearward lid, the said forward lid being slidable over its adjacent rearward lid and slidable relative to one another from front to rear of the compartment for providing access at one time to all parts of the compartment, the lids when open being in superposed position with an air space between adjacent lids and means enabling removal of the lids individually and collectively from the said compartment, selectively, said means comprising grooves in the frame ends of the respective underlying lids, and lugs depending from respective overlying lids adapted to drop into said grooves for travel engagement therein, whereby movement of the topmost lid in forward or rearward direction for a distance corresponding to the length of the said grooves effects movement of the slidable lids responsively to engagement of the lugs with the end of the grooves to complete compartment closing and opening positions.

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