Jan. 12, 1932. J. E. GLOEKLER 1,840,943

REFRIGERATING CABINET

Filed Aug. 1, 1930 2 Sheets-Sheet 1

Fig. 1.

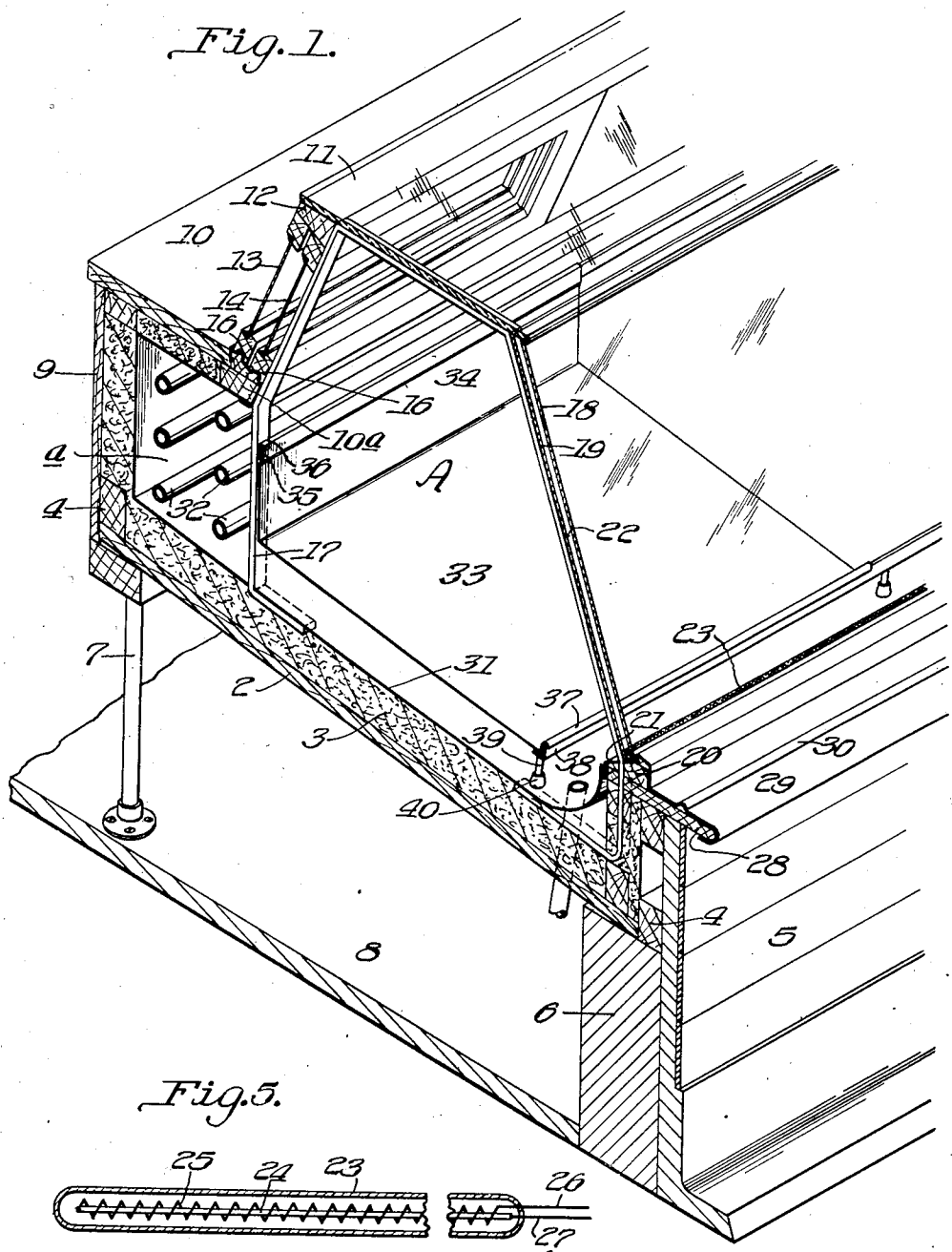


Fig. 5.

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Fig. 2.

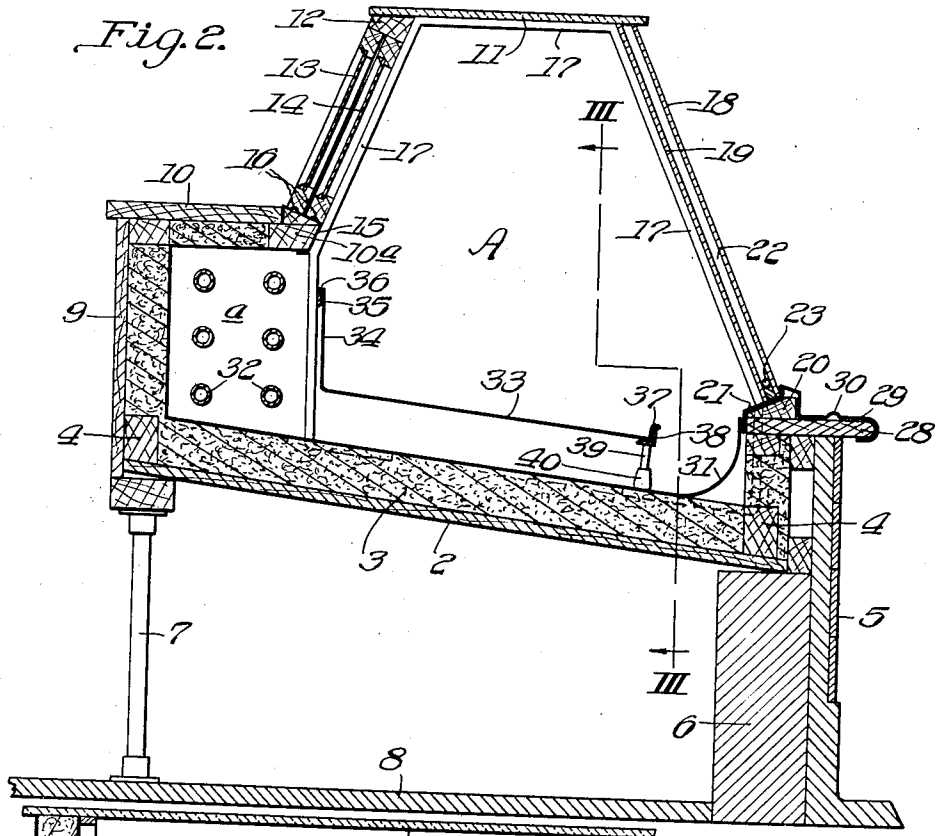


Fig. 3.

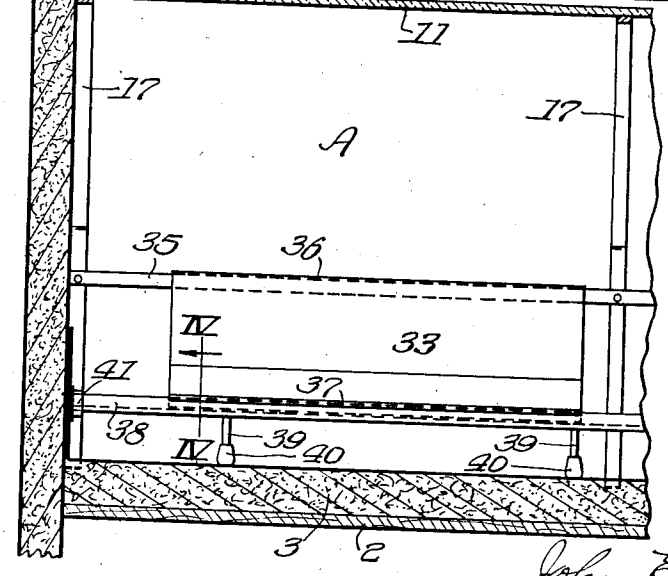
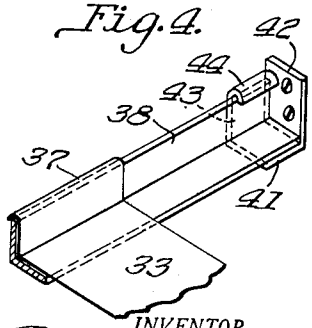


Fig. 4.



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UNITED STATES PATENT OFFICE

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REFRIGERATING CABINET

Application filed August 1, 1930. Serial No. 472,331.

My invention is an improvement in refrigerating cabinets for containing and exhibiting its contents, as meats, vegetables, milk, butter, etc. It has for its object to provide, in such a cabinet, improved means for circulation of the refrigerating air in and throughout the interior containing cavity, an improvement in the bottom construction of such cavity, longitudinally adjustable and removable supporting shelf or shelves, means for preventing condensation in the interior space between the double front glass walls of the cabinet, an improved supporting and arresting front shelf below such double wall front, an improved trackway for the rear sliding doors, and various other features of construction and advantage, as shall be more fully hereinafter described.

In the drawings illustrating one preferred embodiment of the invention:

Fig. 1 is a cross sectional perspective view of the cabinet showing its construction;

Fig. 2 is a similar transverse vertical section;

Fig. 3 is a partial longitudinal section on the line III—III of Fig. 2;

Fig. 4 is a perspective sectional detail view on the line IV—IV of Fig. 3, showing the removable mounting for the sliding shelf or pan;

Fig. 5 is a part sectional detail view enlarged, of the condensation preventer.

In cabinets of the same general kind or character as that involved herein, it is usual and customary to provide a main enclosing chamber, surrounded by walls partly of glass for visual inspection from the front or back, with means for access to the chamber from the rear, and having communication with an adjacent refrigerating chamber.

Such cabinets are usually more or less elongated, of rectangular form, mounted upon a lower supporting base or frame adapted to be arranged in a store room singly or in series in the manner of a counter or counters, for convenient inspection from the front and access from the rear, and provided with flat top portions for placement of merchandise or other articles of different kinds.

In my present invention I utilize the main essentials of such cabinets, in which there is a general conformity to established construction and design, but I have incorporated in the refrigerator certain special constructions as to the several features above enumerated.

Referring to the drawings, illustrating the construction in cross section, Figs. 1, 2 and 3, A is the main food or other article containing chamber, located above a bottom main supporting floor 2 upon which is laid a comparatively thick body 3 of comminuted cork or other insulating material.

Such body occupies and constitutes the main lower bottom portion of chamber A, extending between longitudinal timbers or framing members 4 carried on the base and arranged backwardly from a front panel or wall 5, of wood or other suitable material.

The cabinet is firmly supported upon front wall 6 and a series of rear posts or columns 7 extending upwardly from a lower floor board 8, by which the cabinet is mounted on any suitable supporting floor surface.

A refrigerating chamber *a*, at the rear of the cabinet extends longitudinally thereof between the rear wall 9 and an upper removable covering shelf 10, of standard construction, which chamber is in open communication with the front enlarged chamber A.

Such chamber is provided at its top with a covering and enclosing relatively narrow longitudinal top 11 of glass or other suitable material, rigidly supported upwardly at the proper height by continuous framing, as an upper supporting bar 12, incorporated with suitable end framing members, providing between the top and the forward edge of shelf 10 a communicating passageway for entrance or exit.

Such opening is covered by a plurality of longitudinally slidable doors 13 and 14, adapted to pass each other for opening and closing, and preferably mounted at an incline, as clearly shown.

For the purpose of providing for easy and convenient slidable mounting of such doors or windows, the inner terminal portion of shelf 10, or its inner framing member 10*a* is provided with a sheet metal sill covering 15 provided with longitudinal upwardly ex-

tending ribs 16, upon which the windows are mounted by rib-engaging grooves in their lower rails, in tongue and groove engagement, thereby providing not only for easy slidable movement back and forth, but also insuring continuous interlocking location. The sheet metal sill member 15 as shown completely covers the exposed surface of the framing, providing a good finish therefor, with facility for easy cleaning.

Inwardly of such rear window framing is the continuous metal supporting bar 17, extending upwardly from bottom 2—3, along underneath the top 11 and downwardly at the front of the cabinet, and at each end thereof. The lower ends of such bars are extended inwardly as indicated in dotted lines for securing to the bottom construction, whereby to provide for rigid and serviceable support of the superstructure.

The main front portion of the cabinet consists of an outer glass window pane 18 and an inner parallel pane 19, spaced apart and mounted at a desired inclination lengthwise of the cabinet, extending from the top 11 downwardly to and against the longitudinal framing member 20 of the front. Such member is preferably provided with a covering lining 21 of sheet metal or other suitable material, with suitable intervening packing, rendering the interior space 22 as moisture-proof as possible.

For the purpose of dehumidifying or preventing condensation in such interior space 22, which is comparatively narrow, I provide the means illustrated in detail in Fig. 5. Such device consists of an elongated glass tube 23, hermetically sealed at each end, and containing a central asbestos covered wire 24 and a surrounding resistance wire 25, connected with the terminals 26—27 at one end, and in circuit with a controllable source of current.

By such means a comparatively low degree of heat is generated by the current, whereby to effect vaporization of any condensed moisture which may possibly accumulate in space 22, thus maintaining clear vision of the panes 18 and 19.

Extending outwardly below or beyond front framing member 20 is the projecting front shelf 28, mounted upon the front wall construction, as clearly shown in Figs. 1 and 2. For the purpose of providing a finishing cover for such shelf, giving it an attractive and sanitary surface, it is covered by the sheet metal sheathing 29, which may be a continuation of the sheet metal covering 21, or independent thereof.

Such sheathing 29 completely covers shelf 28 and also the front edge portion of framing 20, and is turned around the front edge of the extended shelf providing a half round finished edge thereof.

Midway of the longitudinal width of the shelf the metal sheathing 29 is upwardly ribbed, as at 30. The purpose of such construction is to provide an amply wide shelf for support of baskets, packages, or the like thereon, while the rib 30 acts to arrest any outward sliding or accidental removal of such supported articles, and materially aids the convenience of customers in their position in front of the cabinet, while making a purchase.

As will be observed, the lower floor surface of bottom 3 slopes continuously downwardly in front of the refrigerating chamber *a*, clear to the outer front bottom portion of the enlarged chamber A, such surface being continuously covered by a sheet metal flooring 31, preferably curved upwardly at the bottom and secured against the inner edge portion of the sheathing 21.

Such construction provides not only for downward circulation of cold air from the refrigerating chamber *a*, and the pipes 32 or other cooling media therein, but at the same time provides a continuous smooth and easily cleaned bottom for the entire lower portion of the cabinet interior. Such bottom covering may be extended upwardly along the back inner portion and to the top of the chamber *a*, the shelf 10 being preferably removable for access thereto when desired.

For the purpose of providing a support for any suitable merchandise, I provide a longitudinally slidable pan 33 of sheet metal having a rear wall 34 which is supported on a rear longitudinal bar 35 by a narrow outwardly turned lip 36.

Bottom 33 extends forwardly and slightly downwardly, preferably parallel with the bottom, and is slidably mounted by its lower edge and an upwardly extending turned over lip 37, upon an elongated angle bar 38.

Such bar, which is preferably co-extensive of the full length of the cabinet, is provided with a plurality of supporting posts 39, each having a rubber shoe terminal 40, adapted to rest upon the sheet metal covering 31 of the bottom.

Bar 38 as thus made is removably mounted by each end in brackets 41 secured by their flanges 42 and holding screws against the opposite end walls of the cabinet, as indicated in Fig. 4. Bracket 41 is of angular shape, extending a short distance outwardly from the flange base 42, the bottom 41 of the bracket and vertical wall 43 conforming to the cross section of angle 38. Wall 43 is provided with a turned over lip 44 adapted to engage the upper edge of angle bar 38 and to hold it securely at each end when inserted.

As thus constructed pan 33 may be shifted longitudinally of the cabinet to any desired position, so as to support its contents in front of the observer, intermediate spaces at either end of the pan being utilized for other material, within the judgment or convenience

of the user. The construction of the pan 33 and its supports provides for easy removal of the pan by merely lifting its rear edge upwardly from bar 35 and removing it bodily through the rear window space by adjusting one or more of the windows 13—14.

Bar 38 likewise is readily detached from its supporting brackets by merely turning it outwardly and away from the wall 43 so as to disengage the upper edges of the angle ends from the lips 44, at the same time lifting supporting posts 39 from the floor surface so that the angle bar itself may be thus easily removed for cleansing, etc.

The construction, operation, advantages, and use of the cabinet will be readily understood and appreciated from the foregoing description. While it is generally similar to other standard well known refrigerating cabinets, the several features above enumerated are not only in themselves but in their entire assemblage highly useful and helpful, as well as largely ornamental and attractive in connection with a cabinet of the kind involved.

Having described my invention, what I claim is:

1. In a refrigerating cabinet, the combination in an upwardly erected commodity display enclosing structure as described, of an inclined bottom, rear and front vertical walls, an inwardly extending shelf over the rear wall providing a refrigerating chamber, upwardly and inwardly sloping rear and front walls above said shelf and the front vertical wall respectively having a covering top and enclosing a commodity containing chamber communicating with the refrigerating chamber, the sloping rear wall being partly composed of opening and closing doors, and the sloping front wall being composed of spaced apart glass panes with an intervening condensation preventer consisting of a continuous glass tube laid along between the bottom edges of the panes and containing a heat generating resistance element in circuit connection with a source of current.

2. In combination with a refrigerating cabinet as described having a main forwardly and downwardly sloping bottom interior surface, enclosing walls, a rear refrigerating chamber, and a front communicating commodity chamber; a rear longitudinal supporting rail between said chambers near the top of the refrigerating chamber, a longitudinal supporting rail parallel therewith and located materially below the rear rail slightly above the forward bottom portion of the commodity chamber, and a supporting pan having a rear upwardly extending wall terminating in an edge slidably carried by said rear rail and a front edge slidably supported on the lower forward rail.

3. A refrigerating cabinet as described in claim 2 characterized by oppositely located brackets secured to the inner faces of two opposite enclosing walls and each having a lower supporting flange and a vertical flange having a rounded embracing lip providing separable supporting mountings for the forward supporting rail, said rail being in the form of an angle bar and provided with a plurality of downwardly extending fixed supporting posts having rubber covered terminals.

4. In combination with a refrigerating cabinet as described having a front transparent wall, a forwardly extending longitudinal shelf intermediate the front wall and bottom of the cabinet provided with a sheet metal sheathing having a longitudinal rib intermediate of its width and with the outer edge of the sheathing bent downwardly around the outer edge of the shelf, and its inner portion extended underneath and providing a sealing lining for the lower edge of the front wall.

In testimony whereof I hereunto affix my signature.

JOHN EDWARD GLOEKLER.