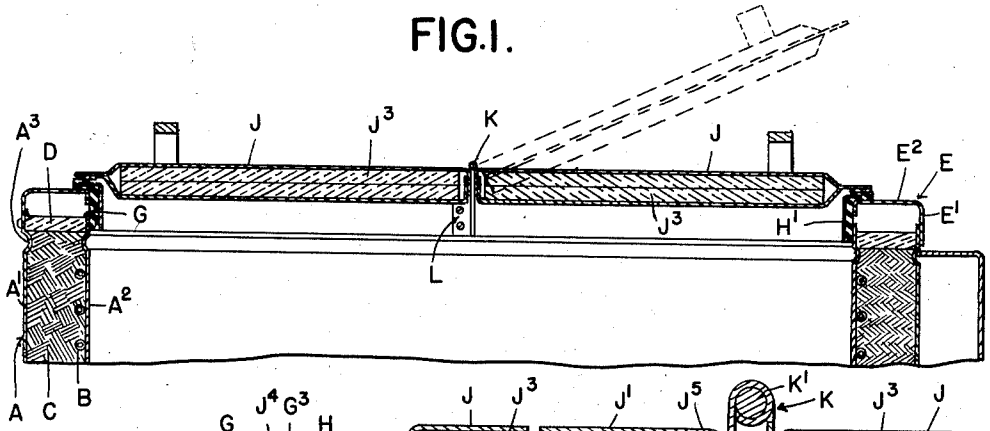
June 10, 1952 H. W. WHITMORE 2,599,732

CLOSURE CONSTRUCTION FOR REFRIGERATOR CABINETS

Filed June 28, 1948

FIG.1.



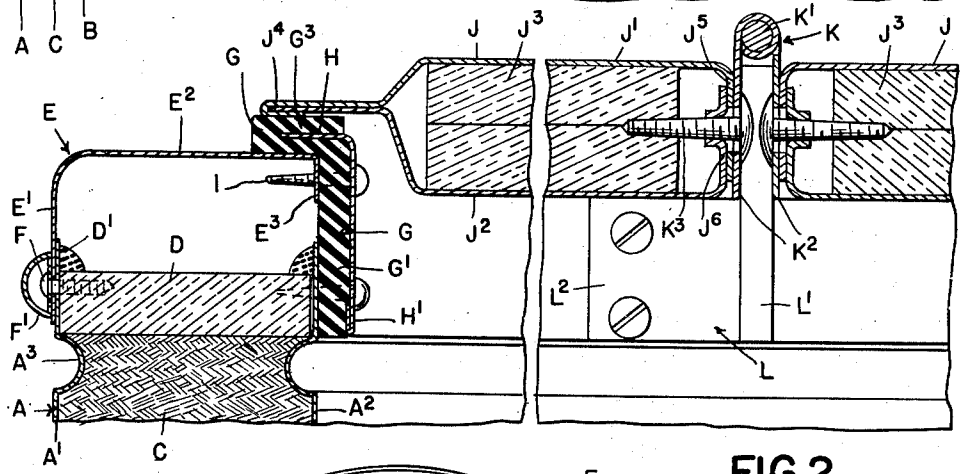


FIG.2.

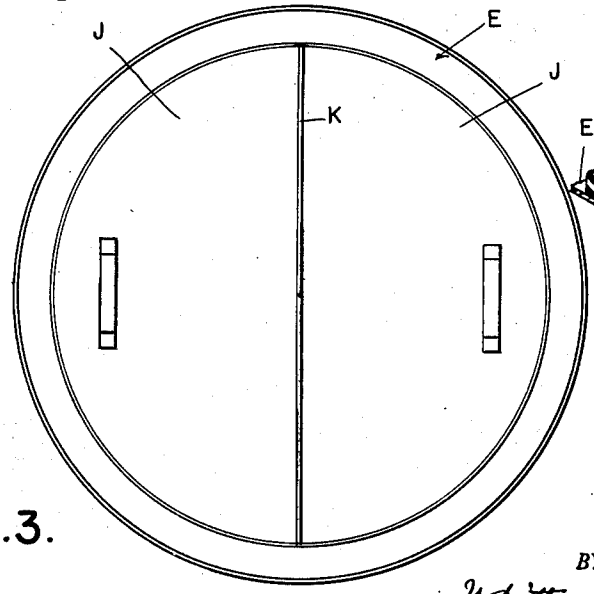


FIG.3.

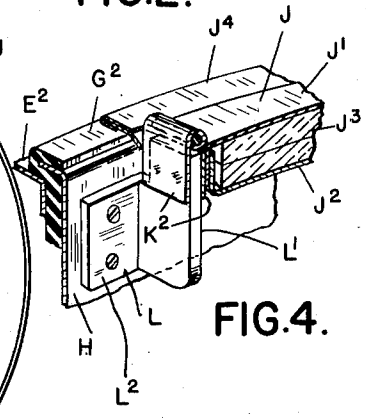


FIG.4.

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CLOSURE CONSTRUCTION FOR REFRIGERATOR CABINETS

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2 Claims. (Cl. 220—9)

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The invention relates to refrigerator cabinets of that type which open at the top, and the invention has more particular reference to the construction of the closure means therefor.

It is the object of the invention to obtain a construction which provides ready access to all portions of the storage chamber within the cabinet and, at the same time, forms effective thermal insulation.

To this end the invention consists in the construction as hereinafter set forth.

In the drawings:

Fig. 1 is a vertical cross-section through the upper portion of a refrigerator cabinet provided with my improved closure means;

Fig. 2 is an enlarged section corresponding to a portion of Fig. 1;

Fig. 3 is a top plan view; and

Fig. 4 is a perspective view.

The cabinet A is preferably of cylindrical form having a vertical axis and comprises an outer casing member A' and an inner concentric casing member A^2. The latter is provided with suitable refrigerating means, such as a helical expansion coil B surrounding and secured thereto. The space between the outer and inner casings is filled with suitable thermal insulating material C, which extends upward to near the top of the casing members. A short distance below the top, the casing members A' and A^2 are provided with inward projections, preferably beads A^3, which form supporting ledges for an annular substantially rigid insulator member D. This, when in position, is secured to the casing members by mastic D' to form a sealed joint. Secured to the outer casing member A' is a metallic ring E of angle cross-section having a vertical wall E' and horizontal wall E^2, which latter extends over into alignment with the inner casing member A^2 and has a downwardly extending flange E^3. The portion E' is secured to the casing A' and to the member E by screws F and a molding F' conceals the fastening means. The depending flange E^3 is spaced from the upper end of the inner casing A^2 so as to avoid any metallic connection therebetween. Extending between these members and secured thereto is an annular member G formed of rubber, or rubber-like material, having a vertically extending portion G' and a horizontal outwardly extending flange G^2, which latter overlaps the top portion E^2 of the member E. The flange G^2 has a horizontal slit extending from its inner side part way through the length thereof to receive a flange H of a metallic liner member H'. These members are secured to each

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other and to the cabinet by screws I, thus forming a substantially hollow box cross-section above the tops of the casing members A' and A^2. Also the portion G^3 above the slit in the flange G^2 forms a gasket or resilient seat for the closure lid as hereinafter described.

The closure is formed of a pair of complementary semi-circular lid members J, each of which has an upper metallic member J', a lower metallic member J^2 and a semi-circular pad J^3 therebetween formed of rigid thermal insulating material. The members J' and J^2 have the peripheral portions thereof fashioned to contact with each other and to be secured by a return bent flange J^4. The adjacent portions of the lids are straight extending diametrically across the cabinet being formed by overlapping flanges J^5 and J^6 on the metallic members J' and J^2. K is a hinge for connecting the lids J, being of the piano hinge type with the pivot pin K' located slightly above the top of the lids and with depending spaced securing flanges K^2. These flanges are secured to the lid members by screws K^3 which extend through the overlapping flanges J^5 and J^6 and also preferably into the insulator slab J^3. For positioning and retaining the lids upon the cabinet, angle bracket members L are secured at diametrically opposite points to the depending portions H' of the member H. One flange L' of each angle member extends radially inward from the securing flange L^2 and is also extended vertically above said securing flange to engage the space between the flanges K^2 of the hinge member. Thus the pair of lids will be held concentric with the cylindrical cabinet. The peripheral portions being normally seated upon the gasket G^3. Either one of the lids may be opened by swinging it upward and over to rest upon the other lid thereby opening one-half of the area at the top of the cabinet. When the first lid is re-seated, the companion lid can be lifted and turned over in the same manner to open the other half of the cabinet. Also, if desired, both lids may be detached by lifting them off from the flanges L'.

To facilitate assembly of the structure the members G and H are transversely split so that the horizontal flange H may be engaged with the slit in the portion G^2 by relative rotation of these members. After engagement the transverse slits in the members G and H may be located in different vertical planes, so that each member overlaps the slit in the other member. The construction as above described is particularly useful in bottle holding refrigerator cabinets as it provides easy access to all portions of the storage

chamber. Also, where there is a plurality of tiers of bottles within the cabinet with the upper tiers supported by folding shelves, the lids may be arranged with their hinges in vertical alignment with the hinges for the shelves, thus giving access to both tiers.

What I claim as my invention is:

1. The combination with a top opening refrigerator cabinet having spaced inner and outer cylindrical metallic walls and thermal insulating material therebetween, of an annular metallic cap of inverted channel cross-section above said wall, the outer flange of said channel being connected to the outer wall of said cabinet and the inner flange being aligned with but spaced from said inner cabinet wall, an annular member formed of resilient material of low thermal conductivity connected to and bridging the space between the inner walls of said cabinet and cap, said resilient annular member being of angle cross section with the horizontal flange thereof overlapping said cap, an annular metallic lining for said resilient annular member being also of angle cross-section with the horizontal flange thereof engaging a slit in the horizontal flange of said resilient member, a pair of semi-circular lid members peripherally seated upon the horizontal flange of said resilient member, a hinge for connecting said lid members having its pivot axis at the top and depending portions extending between the adjacent straight edges of said lid members and secured thereto, and bracket members secured to said annular metallic lining on diametrically opposite sides thereof having flanges extending upward between the depending portions of said hinge for positioning said lids on said cabinet.

2. A cabinet with a top opening refrigerating cabinet having spaced inner and outer cylindrical metallic walls and thermal insulating material therebetween, of an annular metallic cap of inverted channel cross-section above said walls, the outer flange of said channel being connected to the outer wall of the cabinet and the inner flange of the channel being aligned with but spaced from said inner cabinet wall, an annular member formed of resilient material of low thermal conductivity and being of angle cross-section, the vertical flange of said resilient member being connected to and bridging the space between the inner flange of said cap and inner wall of said cabinet and the horizontal flange of said resilient member overlapping and resting upon the top of said metallic cap, an annular metallic lining for said resilient annular member being also of angle cross-section and having the horizontal flange thereof engaging a slit in the horizontal flange of said resilient member, and a pair of semi-circular lids forming a closure for the cabinet, each of said lids having spaced top and bottom metallic members with thermal insulating material therebetween and with the marginal portions thereof in the same plane and connected to each other, the adjacent straight edge portions of said semi-circular lid members being formed by overlapping flanges of said top and bottom members, a hinge for connecting said lid members having its pivot axis above said top member and having depending flanges secured respectively to the straight edge portions of the lid members being slightly spaced from each other, and bracket members secured to diametrically opposite sides of said metallic lining having flange portions extending upward between the spaced members of the hinge and locating said lids upon said cabinet.

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