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MANUFACTURE OF CABINETS FOR REFRIGERATORS

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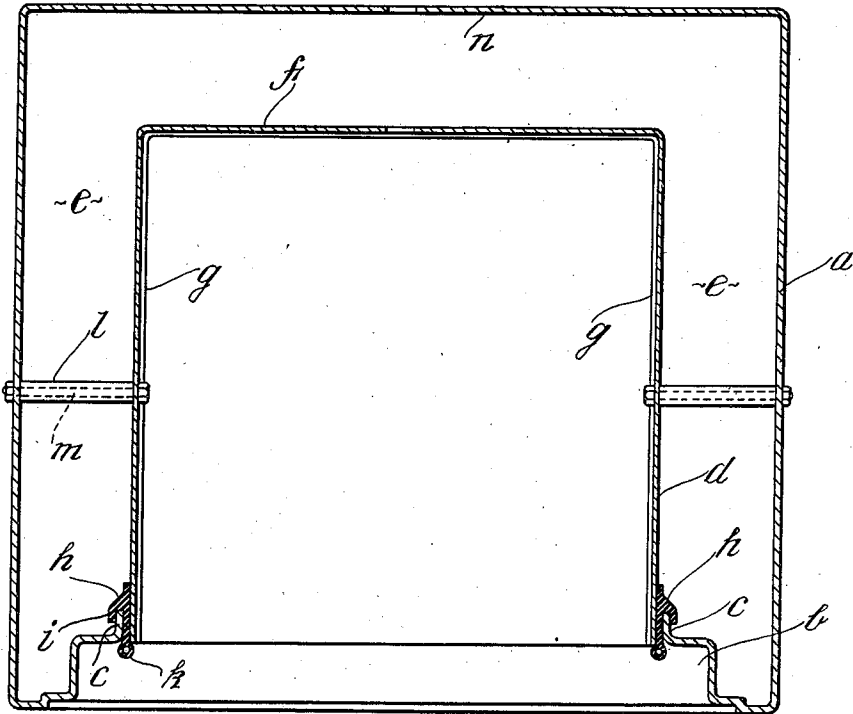


Fig. 1

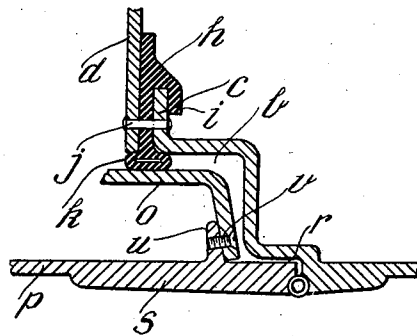
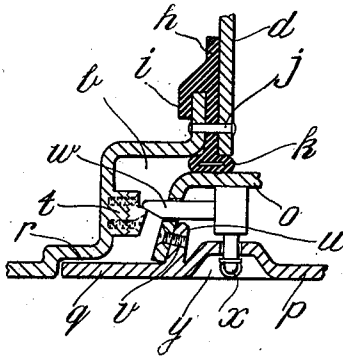


Fig. 2

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MANUFACTURE OF CABINETS FOR REFRIGERATORS

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2 Claims. (Cl. 220-9)

This invention relates to cabinets for refrigerators and has particular, although not exclusive, reference to refrigerators of the class intended primarily for domestic use, the object of the invention being to provide a cabinet which avoids the disadvantages attaching to the employment of vitreous enamelled steel which material has a tendency for the enamelled surface to flake and its liable to be easily damaged in transit.

The present invention is designed to avoid the disadvantages referred to in the preceding paragraph and with this end in view the invention consists in a refrigerator cabinet constructed from an assembly of parts stamped or pressed from plastic material, the several components having in-moulded elements to assist assembly and operation and a resilient packing member being provided which serves to isolate the insulation from the effects of humid atmosphere and forms a yielding cushion for door closure.

Reference will now be made to the accompanying drawing which illustrates by way of example a construction according to the invention and in which:

Fig. 1 is a sectional plan of a refrigerator cabinet and

Fig. 2 is a fragmentary sectional plan showing one form of door structure applicable to the arrangement shown in Fig. 1.

In the construction illustrated the outer shell *a* of a refrigerator cabinet is made in one piece by moulding from plastic material and is formed at the front with a recessed opening *b* for reception of a door as hereinafter described, the inner edges of the opening *b* being turned inward as a flange *c* to which the outer edges of a pressed-up plastic inner shell *d* are adapted to be secured after said shell has been positioned as shown in Fig. 1 and the space *e* between the shells has been packed with insulating material.

The inner shell *d* is of substantially cubical form, is closed at its rear by a wall *f* and is preferably formed with horizontal ribs or corrugations *g* which serve the dual purpose of strengthening the structure and providing supports for shelves. The outer shell *a* may be similarly strengthened.

In assembling the inner and outer shells of the cabinet there is inserted between the forward end of the outer wall of shell *d* and the flange *c* an india rubber or like insertion piece *h* whose inner edges are shaped as shown at *i* so as positively to grip and cover the inner edges of the flanges *c*. The flanges *c* are then secured to the walls of the inner shell by bolts or rivets *j*. The outer or forward edges in the india rubber insertion *h*

consists of a hollow beading *k* which projects into the door recess *b*.

The form of the india rubber insertion piece *h* prevents it from being easily displaced and enables it to act as a packing or gasket to isolate the insulation material on the space *e* from atmospheric effects and compensate for any slight inequalities of shape in the moulded shell *d* and flange *c*. Distance members *l* and bolts *m* are provided to keep the inner and outer shells *a* and *d* aligned and on assembly the rear portion of the outer shell is closed by a back plate *n*, both this plate and the back of the inner shell being perforated for the insertion of the evaporator of the refrigerating unit.

One form of door suitable for the cabinet above described is shown in Fig. 2 and consists of inner and outer parts *o* and *p* both moulded from plastic material and the outer part *p* being formed with a flange *q* adapted to seal in a recess *r* formed around the outer edge of the opening *b* and produce a substantially flush surface on the front of the refrigerator cabinet when the door is closed. The inner part *o* of the door structure consists of a hollowed out pressing capable of being filled with an insulating material. When the door is closed, the operation of the closure means is arranged to force the inner surface of the part *o* of the door into close contact with the hollow beading *k* to produce a fluid tight joint between the closed door and the cabinet.

Preferably such parts as the hinge straps *s* and door bolt striking plate *t* are moulded in one piece with the components by which they are carried and the door part *p* is preferably formed with an internal flange *u* which can be secured by screws *v* to the inner part *o*. The door bolt is indicated at *w* and the door handle at *x* sunk in a recess *y* in the door plate *p* so that no part protrudes beyond the face of the door.

I claim:

1. In a refrigerator cabinet, inner and outer molded substantially cubical shells of plastic material spaced from one another to provide an insulation space therebetween, said inner shell having a straight edge portion defining an opening in the front thereof, said outer shell having a recessed front portion extending towards said inner shell across said insulation space and in alignment with the straight edge portion of said inner shell, said recessed front portion terminating in a rearwardly extending flange lying adjacent the outer surface of said inner shell and parallel to the latter adjacent said straight edge portion, an elastic packing element having a

flat shank disposed between said flange and the adjacent outer surface of said inner shell, the flat surfaces of said shank extending along the adjacent surfaces of said flange and inner shell, said packing element having a hook portion adjacent the inner end of said shank overlapping the free edge of said flange, said packing element having an enlarged bead on the outer end of said shank projecting forwardly of the latter and overlying the straight edge portion of said inner shell and the recessed front portion of said outer shell, and a door hingedly mounted on said outer shell and having an inwardly extending inner portion conforming in shape substantially to the recessed front portion of said outer shell and adapted to compress said enlarged bead upon closure of the door to flatten said enlarged bead tightly against the straight edge portion of said inner shell and against the adjacent recessed front portion of said outer shell, whereby an air-tight seal is formed by one side of the flattened bead for the said insulation space between the inner and outer shells, and another air-tight seal is formed by the opposite side of the flattened bead for the door on closure of the latter.

2. In a refrigerator cabinet, inner and outer molded substantially cubical shells of plastic material spaced from one another to provide an insulation space therebetween, said inner shell being formed with horizontal ribs integral therewith providing supports for shelves, said inner shell terminating at one end in a straight edge portion defining an opening, said outer shell hav-

ing a recessed front portion extending towards said inner shell across said insulation space and in alignment with the straight edge portion of said inner shell, said recessed front portion terminating in a rearwardly extending flange lying adjacent the outer surface of said inner shell in spaced parallel relation to the latter adjacent said straight edge portion, an elastic packing element having a flat shank portion disposed in the space between said flange and the adjacent outer surface of said inner shell, the flat surfaces of said shank extending along the adjacent surfaces of said flank and inner shell and being in contact therewith, said packing element having an enlarged bead on the outer end of said shank projecting forwardly of the latter and overlying the straight edge portion of said inner shell and the adjacent recessed front portion of said outer shell, and a door hingedly mounted on said outer shell and having an inwardly extending inner portion conforming in shape substantially to the recessed front portion of said outer shell and adapted to compress said enlarged bead upon closure of the door to flatten said bead tightly against the straight edge portion of said inner shell and against the adjacent recessed front portion of said outer shell, whereby an air-tight seal is formed by the inner side of the flattened bead for said insulation space between the inner and outer shells, and another air-tight seal is formed by the outer side of the flattened bead for the door upon closure of the latter.

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