June 3, 1941. H. H. WARD ET AL 2,244,276

HINGE

Filed May 6, 1939

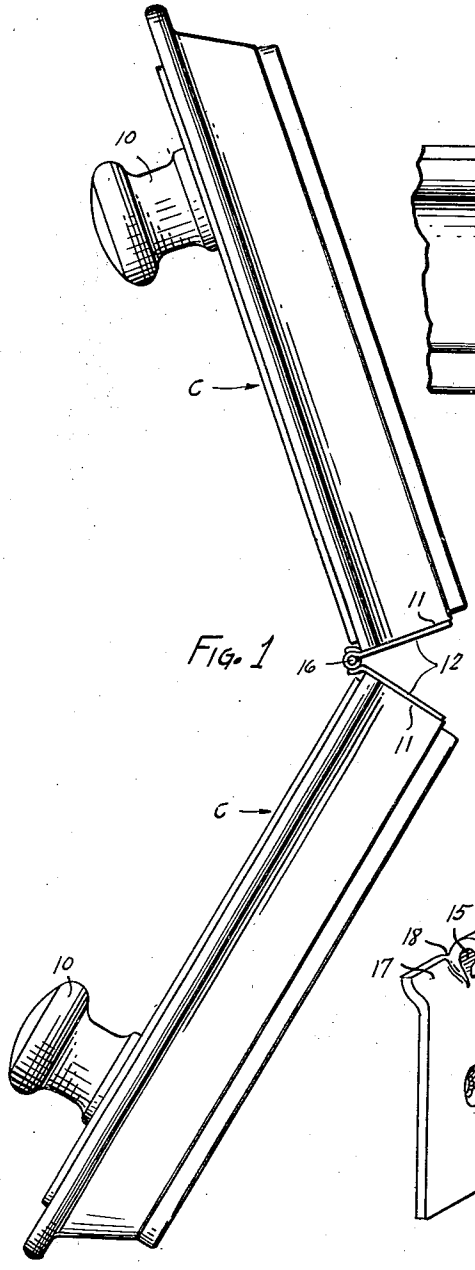


FIG. 1

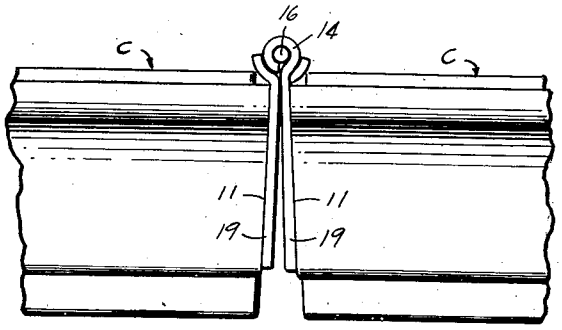


FIG. 2

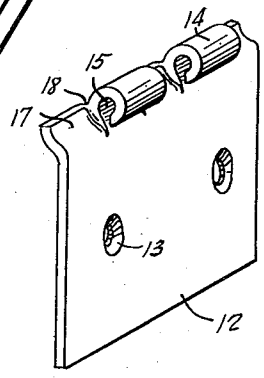


FIG. 3

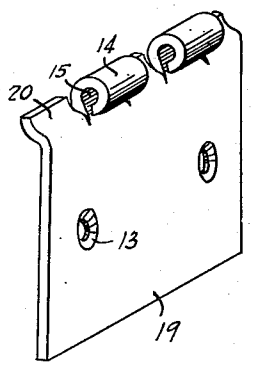


FIG. 4

INVENTOR.
HUGH H. WARD &
SAMUEL B. WARD.

BY Joshua R. H. Potts
ATTORNEY.

Patented June 3, 1941 2,244,276

UNITED STATES PATENT OFFICE

2,244,276

HINGE

Hugh H. Ward, Chester, and Samuel B. Ward, Chester Heights, Pa.

Application May 6, 1939, Serial No. 272,265

4 Claims. (Cl. 16—148)

This invention relates to hinges designed to shed water, and is concerned primarily with a hinge adapted for use with refrigerator cabinets.

At the present time such refrigerating cabinets as those employed in the commercial dispensing of frozen foods ordinarily include a flat top that is provided with an opening which receives one or more covers that are movable into and out of closed position. Due to the fact that these refrigerating cabinets are of an insulated construction, the top wall is of appreciable thickness, and the cover or covers fit therein much in the manner of a plug.

A comparatively recent development in this art is the use of rectangularly shaped covers which are hingedly mounted. Such covers may be hingedly connected to a wall of the opening in which they fit, the more prevalent practice, however, being to employ a pair of covers which are hingedly connected together and which constitute a unit which closes the opening in the upper wall of the cabinet.

The structural characteristics of the covers, the manner in which they interfit in the opening in the cabinet wall, and the structure of the cabinet, practically require the use of a hinge arrangement in which hinge leaves are secured to meeting faces of the cover and which leaves carry a curled tongue arrangement that is disposed above the upper surfaces of the covers, and which tongue arrangement defines an opening for receiving a hinge pintle. Due to the use of refrigerating cabinets of this type around soda fountains, and also because of the tendency of the cabinet to have moisture of condensation collect thereon, there is an ever present likelihood of moisture collecting on the upper surface of the covers; thus, when a cover it tilted as it is being moved into an open position, the liquid and moisture thereon tends to run down to the hinge joint and with the now known types of hinges, the use of which is practical in this field, the moisture will pass between the spaces and interstices created by the interfitted assembled tongue arrangement and enter the interior of the cabinet, where it constitutes a serious hazard and menace to the perfection of the food contained therein.

With the foregoing conditions in mind, this invention has in view, as its foremost objective, the provision of a hinge of the character above-noted which is designed primarily for use with the covers of refrigerating cabinets, but which hinge carries means for preventing moisture or liquid from passing through the hinge joint.

More in detail, this invention has in view, as an object, the provision of a hinge of the character above-noted which includes a pair of leaves, each of which is formed with a series of spaced curled tongues which, when assembled, define a passageway for a hinge pintle and each of which leaves is also formed with a canopy-like structure for bridging the space between the tongues thereon.

Another more detailed object of the invention is the provision of such a hinge in which the canopy-like structure on one leaf is formed integrally thereon, and are deflected outwardly to a greater extent than are the tongues so as to provide for the reception of the tongues on the other leaf.

Yet another object of the invention is the provision of a hinge of the character above-noted in which a canopy-like structure that bridges the gaps between the tongues is integrally connected at each side to the adjacent curled-over tongues.

These and various other more detailed objects and advantages of the invention will in part become apparent and in part be hereinafter stated as the description of the invention proceeds.

The invention, therefore, comprises a hinge for refrigerating cabinets, consisting of a pair of hinge leaves, each of which is formed on one edge with a plurality of spaced curled tongues, the curled tongues on one leaf interfitting with the curled tongues on the other leaf to define a passageway for receiving a hinge pintle. Each leaf has integrally formed therewith a canopy-like member that bridges the gaps between the tongues on that leaf and which member is curved outwardly to a greater extent than are the tongues thereby accommodating the tongues on the other leaf.

In the preferred embodiment of the invention there is an integral connection between the side edges of each canopy-like bridging structure and the adjacent tongues.

For a full and more complete understanding of the invention, reference may be had to the following description and accompanying drawing, in which

Figure 1 is a view in side elevation of a unit consisting of a pair of covers for refrigerating cabinets which are assembled by the improved hinge of this invention,

Figure 2 is an enlarged detail view showing the

manner in which the hinge leaves are connected to the cabinet when assembled,

Figure 3 is an enlarged detail perspective view of a hinge leaf of one embodiment of the invention, and

Figure 4 is a similar view of a hinge leaf of one modification.

Referring now to the drawing, wherein like reference characters denote corresponding parts, it is first to be noted that the hinge of this invention is herein described as assembled with a pair of covers that, together, define a unit which is meeting with widespread use in closing an oblong opening in the top wall of a refrigerating cabinet. Obviously, the use of the hinge is not to be limited to a unit of this particular type, as it may well be employed in mounting a single cover in an opening shaped to receive the same.

As shown in the drawing, a pair of covers are illustrated in Figure 1 and each identified by the reference character C. Each of the covers C carries a handle 10 which is employed for raising or closing the cover. Each of these covers C is of rectangular shape, preferably substantially square, and has an edge face at 11 that is closely positioned in substantially parallel relationship to the corresponding edge face 11 on the other cover. The hinge of this invention is applied to the faces 11 for the purpose of hingedly connecting the two covers C together.

Referring now more particularly to Figures 1 and 3, the hinge for connecting the covers C is shown as comprising a pair of complemental leaves 12, each of which is formed with a suitable number of openings at 13 for securely anchoring the leaf to the face 11 of the cover C to which it is attached. The upper edge of each leaf 12 projects above the top surface of the cover C and takes the form of a plurality of curled-over tongues 14 which define a plurality of openings 15 that, together, define a passageway for a hinge pintle shown at 16.

It will be noted that the spaces between the curled tongues 14 are bridged by the canopy-like structures identified at 17. These parts 17 are preferably formed integral with the hinge leaf 12 and in the form of the invention shown in Figure 3, the side edge of each part 17 is integrally connected to the curled-over tongue 14 by the connecting structure shown at 18. It is evident that the tongues 14 on one leaf are interfitted between the corresponding tongues on the other leaf; hence, the canopy-like structure 17 must be deflected outwardly to a greater extent than are the curled tongues so as to accommodate the tongues on the other leaf.

While any appropriate material may be employed in making the hinge above-described, the invention has particularly in mind the use of sheet metal which is susceptible to appropriate stamping operations for attaining the structure illustrated, as it is by stamping operations that the cost of manufacturing these hinges may be held to a minimum.

A somewhat simpler form of hinge is shown in Figure 4. In this view the hinge leaves, which are identified as 19, have substantially the same structural characteristics as above described for the hinge 12, with the exception that the structure 17 which bridges the spaces between the hinge tongues 14 are replaced by the curved extensions 20 which are not integrally connected to each side of the adjacent tongues 14.

It is evident that when the cover C is in closed position either the canopy-like structure 17 or the extensions 20 project upwardly a slight distance above the top surface of the cover C and thus constitute a seal which prevents liquid or moisture from running down between the spaces between the tongues of the hinge. Moreover, as either of the covers C is raised into an open position, the parts 17 or 20 remain in effective sealing position.

While preferred specific embodiments of the invention are hereinbefore set forth, it is to be clearly understood that the invention is not to be limited to the exact constructions illustrated and described, because various modifications of these details may be provided in putting the invention into practice, within the purview of the appended claims.

We claim:

1. A hinge of the character described comprising a pair of leaves, each leaf being formed with a plurality of spaced curled tongues, the tongues on one leaf being interfitted between the tongues on the other leaf and together defining a passageway, a hinge pintle in said passageway, each of said leaves carrying extensions that are integrally connected to the leaves and in sealing relation with the curled tongues carried thereby and which extensions are curved outwardly to a greater extent than the tongues whereby they sealingly engage the tongues on the other leaf.

2. A hinge of the character described comprising a pair of leaves, each leaf being formed with a plurality of spaced curled tongues, the tongues on one leaf being interfitted between the tongues on the other leaf and together defining a passageway, a hinge pintle in said passageway, and a canopy-like structure carried by one of the leaves and bridging the space between the tongues thereon, said structure being integrally connected at each side to the tongues.

3. A hinge of the character described comprising a pair of leaves, each leaf being formed with a plurality of spaced curled tongues, the tongues on one leaf being interfitted between the tongues on the other leaf and together defining a passageway, a hinge pintle in said passageway, and a canopy-like structure integrally formed with said leaf and connected at each side edge to a tongue, said structure being curved outwardly to a greater extent than the tongues.

4. A hinge of the character described comprising a pair of leaves, each leaf being formed with a plurality of spaced curled tongues, the tongues on one leaf being interfitted between the tongues on the other leaf and together defining a passageway, a hinge pintle in said passageway, each of said leaves being formed with a plurality of canopy-like structures that bridge the spaces between the tongues, each of said canopy-like structures being connected at each side edge to the adjacent tongue.

HUGH H. WARD.
SAMUEL B. WARD.