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3,143,242

CONTAINER SUPPORT

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FIG. 1

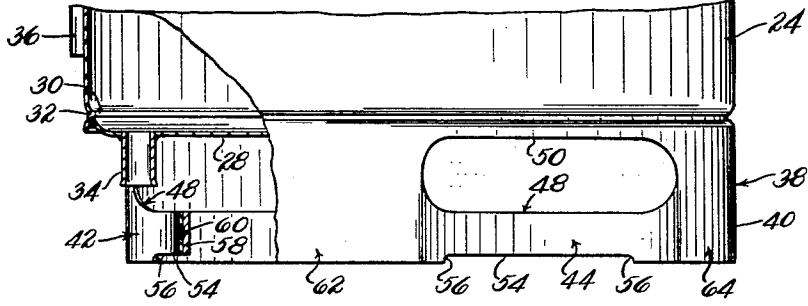
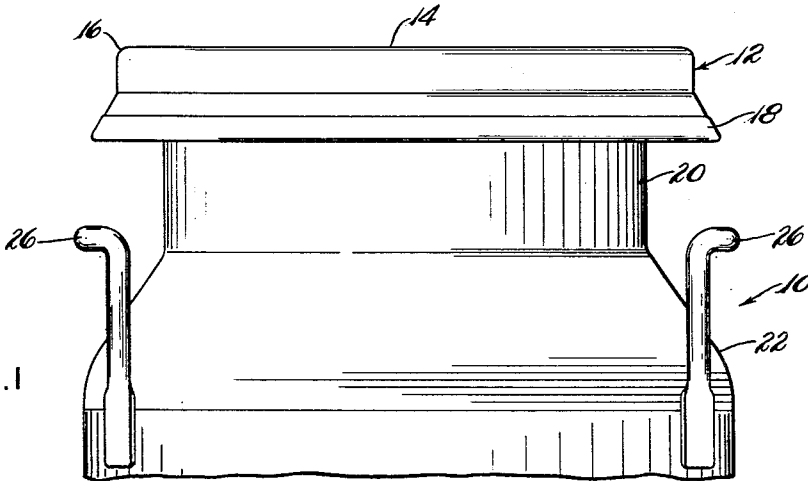
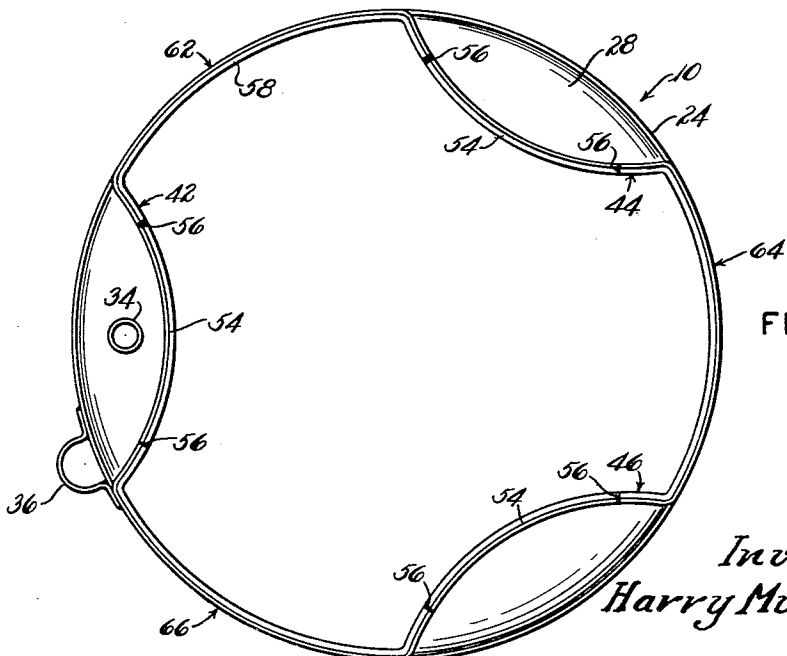


FIG. 2



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CONTAINER SUPPORT

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The present invention relates to a container support and the method of making the support.

In the construction of containers such as milk cans and the like it is desirable to make the bottom and top parts of the containers so that one container may be stacked on top of another container, thereby avoiding the necessity of shelving and thus utilizing the space formerly required by shelves so that many more containers may be arranged within the confines of the storage or shipping facility. However, since the top of the container is usually smaller than the bottom, it is difficult to obtain good stability of the stacked containers without relatively complicated and expensive stacking devices. Therefore, an object of this invention is to provide for a simple and inexpensive construction around the bottom of a container so that it is not only adapted to support the container in upright position on a level surface, but is also adapted to be stacked on the top of another container with relatively good stability.

Another object of the invention is to provide a combination support which has at least three equally spaced ledges on its bottom edges for contacting a level surface and at least three other equally spaced ledges on its bottom edges for contacting the top of another container.

A further object is to provide a support for a container that is not only strong enough for supporting the weight of a loaded container or other containers, but is also strong enough to withstand rough use occurring from dropping the container from heights on its bottom edges.

The preferred embodiment of the support is illustrated in the drawings and described in the specification as being applied to a milk can, although it should be understood that the support is applicable to other types and shapes of containers. Accordingly, the claims, in the manner drafted, should not be construed as being limited only to milk cans or milk cans of the configuration disclosed.

Other objects and advantages of the present invention will be apparent from the following detailed description thereof taken in connection with the attached drawings in which like numerals refer to like parts, and in which:

FIG. 1 is a broken elevation of a milk can showing upper and lower portions, with the lower portion partly in section illustrating the construction of the bottom of the container with respect to the body thereof and the positioning of one inwardly depressed section with respect to the drain fitting.

FIG. 2 is a bottom view of the container illustrating the combination three-element ledge support and the relationship of the drain fitting with respect to the skirt support and one of the inwardly depressed sections.

Referring first to FIG. 1, the numeral 10 indicates in general a container, or more specifically a stainless steel milk can of the type to be employed in cooler cabinets in restaurants for the direct dispensing of milk.

The umbrella-like cover 12 has a top surface 14, a peripheral shoulder 16 and a circumferential outwardly sloped flange 18. The cover 12 also has a conventional "plug" (not shown) which fits tightly within

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the neck 20 of the milk can 10 to effectively seal the latter.

The neck 20 has a diverging portion 22 tapering outwardly and downwardly from the neck until it joins the body 24 of the milk can. The handles 26 are usually spot welded to the body 24 of the can in diametrically opposed relationship.

The bottom member 28 is secured to an interior shoulder 30 of the milk can, preferably by a fusion welding process, the interior shoulder being formed by an exterior annular indentation 32 made about the circumference of the body 24 when the latter is formed into a cylinder from a sheet of stainless steel.

A drain fitting 34 projects downwardly from the bottom member 28 near one edge thereof. The fitting serves to facilitate complete drainage and is a connecting point for a rubber or plastic hose (not shown) through which the milk passes when dispensed upon being installed in a cooler cabinet provided for that purpose. The opposite end of the hose is sealed so that the contents of the milk can may be kept fresh and clean until unsealed for dispensing and in the interim is tucked up within the hose guard 36, which is partially shown in FIG. 1 and the configuration of which is more fully illustrated in FIG. 2. The hose guard is welded to the side of the body 24 of the milk can at a location above and juxtaposed to the drain fitting 34.

The support, indicated generally at 38 in FIG. 1, which constitutes the invention, comprises a skirt 40 which surrounds the bottom of and projects downwardly from the milk can or container a predetermined distance. The skirt may be fabricated separately from the container and be of a different material, or it may be integral therewith, as shown. In the preferred embodiment disclosed, the skirt is fabricated from the same sheet of stainless steel which is subsequently shaped into the milk can. With the exception of the exterior indentation 32, which may be made during or after the sheet is shaped into a cylinder, the skirt 40 is initially and substantially co-extensive with the body 24 of the container.

The bottom member 28 is preferably inserted through the lower end of the shaped cylinder and abutted against the interior shoulder 30, and after the insertion, a fusion welding process may be applied in the vicinity of the exterior indentation 32 which causes the bottom member to become an integral part of the milk can.

The skirt 40 is depressed laterally inwardly to a predetermined extent at spaced areas toward the container axis to form at least three equally spaced sections 42, 44 and 46. The depressed section 42 extends inwardly past the drain fitting 34, as illustrated in FIG. 2. Obviously, the skirt may be depressed in more than three sections, but the preferred construction of at least three depressed sections has been found to give sufficient stability for the two types of surfaces upon which the container will be supported upright.

Circumferentially spaced slots 48 are formed in the skirt 40, the lower part of the slots being in the depressed sections and substantially laterally coextensive therewith, and the upper part of each slot being formed from the cylindrical periphery of the skirt. The top edge of each slot, as seen at 50 in FIG. 1, parallels the annular indentation 32 in the body. Although the slot at depressed section 42 is necessary in order to permit the passing of the hose therethrough from the drain fitting 34, the other two slots are deemed desirable to decrease weight and to provide handle means to facilitate handling the container in its inverted position. Also, the slots permit drainage of wash water from the skirt in inverted position.

The slots 48 are preferably punched through the stainless steel sheet before it is shaped into the container cylin-

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der, although the slots may also be cut after the sheet is shaped.

Along the bottom edge of the skirt 40 an undercut portion or notch 54 is made in each of the depressed sections, preferably somewhat less in lateral extent than the depressed sections and the slots therein. The notches 54 have shoulder 56 at each end, for a purpose to be described.

A stiffener band 58 formed of the same kind of material as the skirt 40, although of a heavier gauge, conforms with the interior surface of the skirt below the slots 48. The stiffener band may be secured to the skirt by spot welding, as indicated at 60 in FIG. 1, for example. The bottom edge of the band is flush with the bottom edge of the skirt at all points. The purpose of the stiffener band is to provide a stronger construction for the support 38 and to enable it to withstand hard use. Obviously, the stiffener band may be formed and inserted at any time during the construction of the support.

The aforedescribed construction results in a support for a container capable of withstanding hard use and the weight of a loaded container as well as the weight of other containers, within practical limits. As viewed from the bottom in FIG. 2, the undercut portions 54 constitute one three-element ledge support and the remainder of the skirt constitutes another three-element ledge support; the sections 62, 64, and 66 being substantially coextensive with the body 24 of the container 10. Therefore, when the container is supported upright on a level surface, such as the floor of the cooler cabinet, the lowermost edges of the skirt constitute the one three-element ledge support to maintain the container in a position of upright stability. When the container is stacked upon the top of another similarly constructed container, the edges of the undercut portions 54 register neatly on the top surface 14 of the cover 12, constituting another three-element ledge support. The shoulders 56 at each end of the undercut portions 54 engage over the peripheral shoulder 16 on the cover 12 of the other container and serve to prevent the shifting of the top container from its stacked position, thereby enhancing the overall stability of the latter three-element ledge support in said stacked position. The undercut portion 54 also serves an additional function of providing a clearance for the usual lever in the floor of the cooler cabinet when the container is moved into and out of said cabinet.

What is claimed is:

1. A container having a bottom support comprising a skirt substantially coextensive with the periphery of said container, said skirt having spaced peripheral sections, laterally inwardly depressed sections integral with and adjoining the first said sections, and undercut portions extending along the bottom edges of said inwardly depressed sections, each of said undercut portions having shoulders at each end thereof adapted to engage over the top of another like container when stacked thereon.

2. A container having a bottom support comprising a skirt substantially coextensive with the periphery of said container, said skirt having spaced peripheral sections, laterally inwardly depressed sections integral with and continuous between the first said sections, undercut portions extending along the bottom edges of said inwardly depressed sections, and a stiffener band secured to and conforming with the interior surface of said skirt support.

3. In an article of manufacture, the combination with a container of a skirt support projecting down from and around the bottom thereof, said skirt support having spaced sections about the periphery thereof depressed laterally inwardly to a predetermined extent, outer sections integral with and adjoining the said depressed sections, each de-

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pressed section having an undercut portion along its bottom edge, the edge of each undercut portion adapted to register with the top of a second container and support in upright position the first said container, and the remaining bottom edges of the skirt support adapted to register with the level surface of a floor to support the container in upright position thereon.

4. In a milk can having a body, an inwardly tapered neck connected to the body, a substantially flat cover with peripheral shoulder on said neck, a bottom member secured to the other end of said body, a drain fitting projecting out of said bottom member near the intersection of said bottom member and said body, and a hose guard secured to the side of said body juxtaposed to said drain fitting, the improvement comprising a skirt support around the outer periphery of said bottom member having sections substantially coextensive with the side walls of said body, said skirt support having slots formed therewithin and spaced about the periphery of said support, inwardly depressed sections formed in said support and disposed substantially below said slots, a stiffener band disposed along the inside surface of said extension below said slots and having a bottom edge which is flush with the bottom edge of said skirt support, one of said depressed sections extending inwardly of the drain fitting, each of the inwardly depressed sections having an undercut portion, the edges of said undercut portions constituting a three-element ledge support for registry with said cover of another milk can when said first milk can is stacked thereupon, the remaining edges of the skirt support constituting another three-element ledge support when said can is standing upright on a level surface.

5. A container having a bottom support comprising, a skirt extending from the periphery of the bottom of said container, spaced continuous sections of the periphery of said skirt being laterally inwardly depressed, undercut portions along the bottom edge of said spaced continuous sections to matingly engage a cover for said container, and the bottom edges of said skirt in which said undercuts are formed providing stable support for said container on a level surface.

6. In a container having generally circular top and bottom ends with a cylindrical body, an improved bottom end support comprising, a skirt extending from the periphery of said bottom end, laterally inwardly depressed sections spaced in the periphery of said skirt forming a continuous arcuate surface, and undercut portions along the bottom edge of said spaced sections.

7. In a container having generally circular top and bottom ends with a cylindrical body, an improved bottom end support comprising, a generally hoop-shaped extending axially from the periphery of said bottom end, radially inwardly depressed sections spaced in the periphery of said skirt to form a continuous arcuate surface, slots in said skirt at the top of said depressed sections, undercut portions along the bottom edge of said spaced sections, and a stiffener band secured to and conforming with the interior surface of said skirt.

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