

March 7, 1967

J. B. SWETT  
CONTAINER

3,307,603

Filed Aug. 2, 1965

2 Sheets-Sheet 1

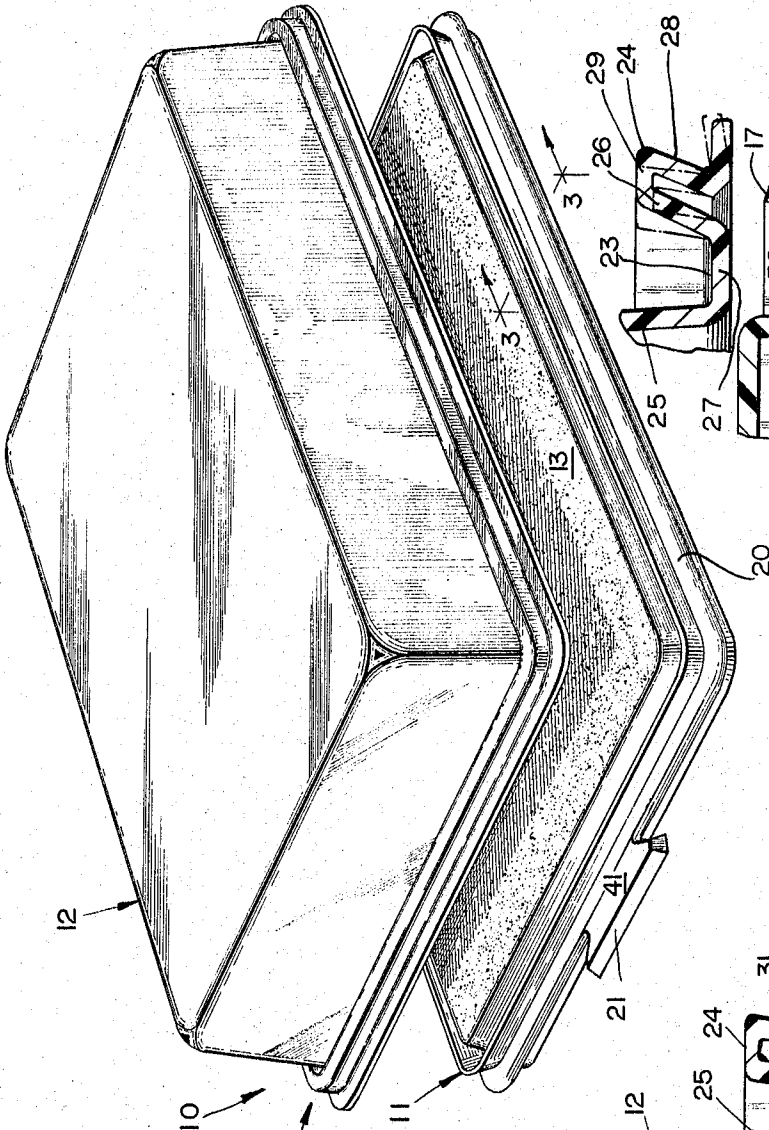


FIG. 1

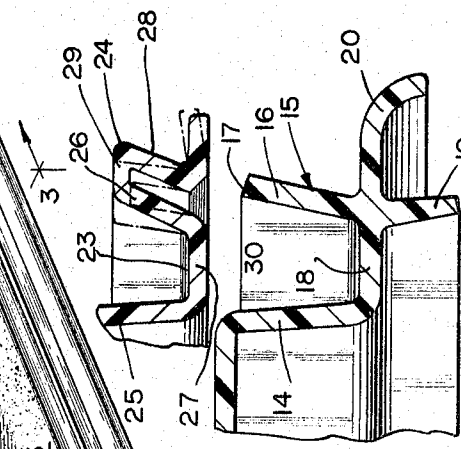


FIG. 3

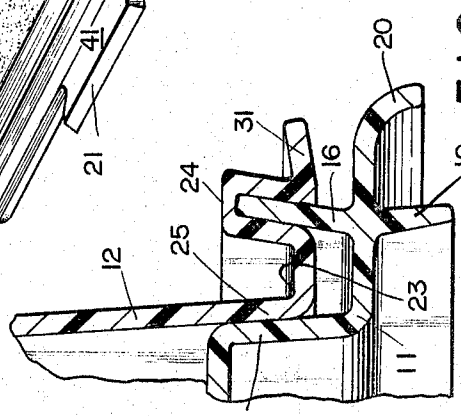


FIG. 4

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2 Sheets-Sheet 2

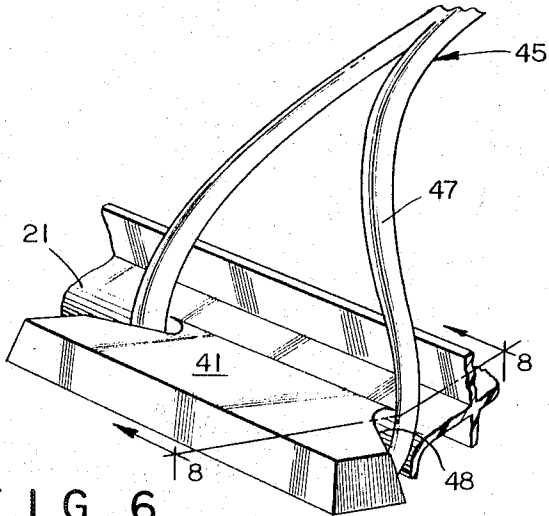


FIG. 6

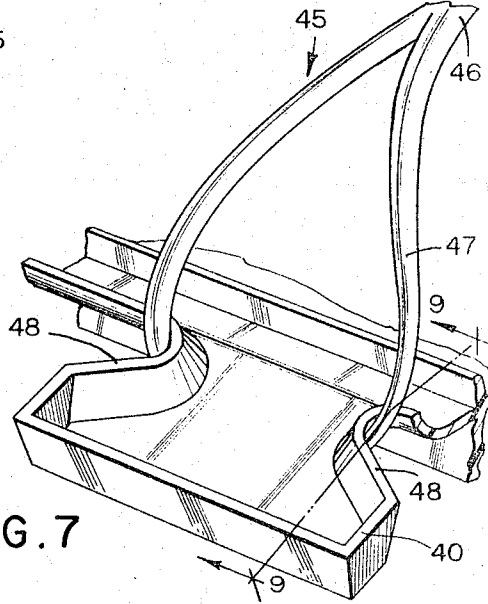


FIG. 7

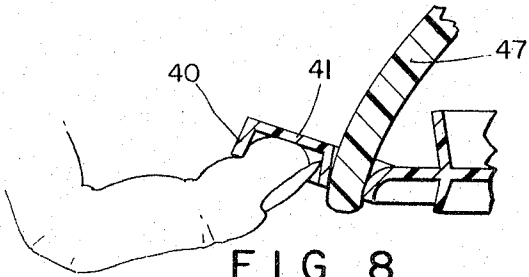


FIG. 8

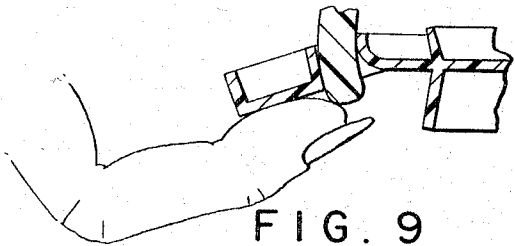


FIG. 9

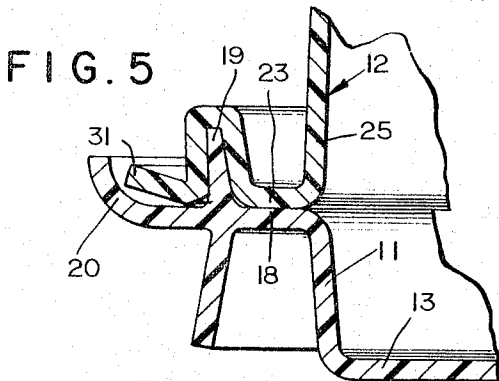


FIG. 5

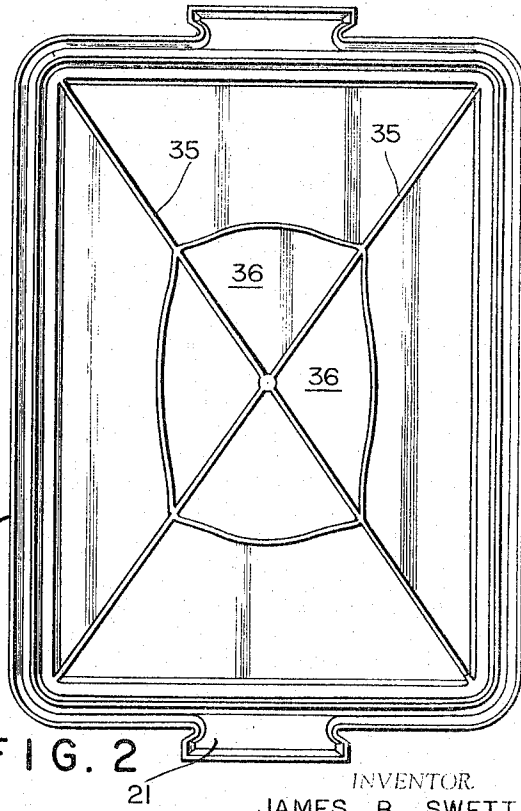


FIG. 2

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3,307,603  
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6 Claims. (Cl. 150—5)

This invention relates to a container and more particularly to a container which exhibits a moisture-proof peripheral seal and which is particularly adapted for the serving and storage of cakes and the like.

Container of this general type are well known as evidenced by assignee's prior U.S. Patent 2,765,831 to Tupper entitled, "Food Storer and Dispenser," issued October 9, 1956. Food storage containers sealed in accordance with the structure set out in this Tupper patent are generally satisfactory but are, however, undesirably subject to dislodgment of the sealing closure from the base portion thereof upon rough handling. A further disadvantage of prior art structures of this type is their inherent difficulty in obtaining a satisfactory moisture-proof seal along relatively long and straight sides.

The construction of the present invention overcomes this above stated difficulty and further enhances the sealing effect between the base and closure portions of the container by providing a double peripheral seal comprised of a first sealing effect which is accomplished by a wedging action and a second sealing effect made possible through the coaction of an upstanding rib with a downwardly projecting U-shaped rim which second seal further serves to hold the first wedged seal in place when the container is subject to rough handling such as occasioned by the dropping or the bumping of such in use.

It is also an object of the present invention to provide a container having a base and closure portions which have alternate use when the base portion of such is placed in both upright and inverted positions and by the provision of carrier harness means coacting with handle portions of the container base wherein such container may be conveniently transported while the base portion of such is in either its upright or inverted position.

A still further object of the present invention is the provision of novel handle means which is equally convenient to grasp in transporting the base portion of the container while such is either in its upright or inverted position.

With the above, and other objects in view which will hereinafter appear, the nature of the invention will be more clearly understood by reference to the following detailed description, the appended claims, and the several views illustrated in the accompanying drawings.

In the drawings:

FIGURE 1 is a perspective view of the base and closure portions of the container of the present invention, the closure portion having been removed and placed in position for sealing contact with the base portion for increased clarity;

FIGURE 2 is a bottom view of the base portion of the container of the present invention and shows in particular the several partitions useful in separating different foodstuffs and the like when the base is utilized in its inverted position;

FIGURE 3 is a partial sectional view taken along the line 3—3 of FIGURE 1;

FIGURE 4 is a partial sectional view similar to that shown in FIGURE 3 of the drawings but wherein the closure portion of the container has been placed in sealing contact with the base portion thereof in its upright position;

FIGURE 5 is also a partial sectional view such as that shown in FIGURE 4 of the drawings but with the base in its inverted position;

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FIGURE 6 is a partial perspective view on an enlarged scale of the base handle and harness of the present invention while the base is in an upright position;

FIGURE 7 is a view similar to FIGURE 6 of the drawings but wherein the base is placed in an inverted position;

FIGURE 8 is a sectional view through line 8—8 of FIGURE 6; and

FIGURE 9 is a sectional view through line 9—9 of FIGURE 7.

Turning now to the drawings and more particularly to FIGURES 1 through 4 thereof, the container 10 is shown and comprised of a base section 11 and a closure portion 12. The base 11 is preferably formed of a relatively stiff and rigid material such as high-density polyethylene or polypropylene. The base 11 is also generally rectangular in shape and thus presents sides having relatively long edges for presentation in moisture-proof sealing contact with corresponding sides of the closure. Containers of this type presenting such relatively long uninterrupted edges for sealing contact have in the past been extremely difficult to provide with effective sealing means. This is due in part to the tendency of respective contacting portions of the closure and base of previous seal constructions hitherto known, to separate particularly at the mid-point of such relatively long straight side portions because of the difficulty of maintaining contacting pressures thereupon in such areas. The device of the present invention overcomes such tendency by providing a main sealing effect which is constantly under stress and thus has reduced tendency to give way along such relatively straight side portions.

The base 11 is provided with an uninterrupted top surface 13 which is preferably pebbled so as to increase the friction between the surface of cakes and the like supported thereupon and such supporting surface. A downwardly and preferably outwardly directed side wall 14 projects from the periphery of the supporting surface 13 in such a manner so as to partially provide the base 11 with a peripheral upwardly opening U-shaped rim 15. The configuration of such U-shaped rim 15 is complemented by an outer side wall 16 terminating in a free edge 17 and a base wall 18 interconnected between side walls 14 and 16. The rim 15 alternatively may be of a V-shape, it being particularly important that such be adapted to wedgingly receive a complementary section of closure 12 as will be hereinafter more clearly set out.

The base 11 is further provided with a downwardly and slightly outwardly projecting secondary wall 19 which extends from the rim 15 thereof and in generally opposed relationship to the outer side wall 16 thereof. Approximately intermediate the walls 19 and 16 and preferably in generally opposed relationship to the connecting wall 18, there is provided an outwardly and downwardly extending flange 20 which provides one means by which the base 11 may be conveniently engaged by one's fingers and thus serve as means for transport of such as well as serving to increase the rigidity of the rim 15 and the secondary wall 19. Each end of the base 11 is further provided with an upwardly and outwardly projecting handle 21 having an upper surface presenting a generally planar configuration and which preferably is formed as an extension from flange 20.

The closure 12 is generally of a configuration and dimension similar to that of the base 11 and is further provided with a peripheral rim portion 22 having a first inner and upwardly directed U-shaped section 23 and an outer downwardly directed second U-shaped section 24. The first U-shaped section 23 is comprised of inner side wall 25 and an intermediate side wall 26 integrally connected thereto by connecting wall 27 while the second U-shaped section 24 shares intermediate side wall 26 as its inner

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boundary and is further composed of outer side wall 28 spaced therefrom and generally parallel thereto and integrally connected therewith by means of upper connecting wall 29. The closure is preferably formed of a relatively soft and deformable plastic such as low-density polyethylene so as to better sealingly engage the base 11 as will be more apparent.

It may thus be noted from FIGURE 3 of the drawings in particular that the initial upper lateral dimension of the first U-shaped section 23 of the closure 12 is of a considerably larger extent than the upper lateral dimension of the entrance 30 of the rim 15. Accordingly, as shown by the dotted lines in FIGURE 3 the intermediate wall 26 is inwardly urged when the closure and base are placed in sealing engagement with each other. This inward urging of the intermediate wall in effect wedges the first U-shaped section 23 within the peripheral rim 15 of the base 11 and thus forms sealing contact therewith respectively between the inner surface of the inner side wall 25 and the outer surface of the inner side wall 14 and between the inner surface of the outer side wall 16 and the outer surface of intermediate side wall 26. This action thus forms a resultant wedging action between the first section 23 and the rim 15 so as to assure a live seal therebetween even within the mid-points of the relatively long straight sides of the base and closure.

A second seal is also formed between the base and closure by means of the interaction of the closure second downwardly U-shaped section 24 and the outer side wall 16 of the rim 15 including the free edge 17 thereof and in this manner not only additionally insures that the contents within the container are effectively sealed from the atmosphere but more important serves to maintain the initial sealing action caused by the wedging effect in proper location by preventing the upward movement of the second U-shaped section 24 which would tend to dislodge the wedged U-shaped section 23 from the rim 15. Such positioning effect is brought about by the inward lateral force transmitted to the outer side wall 28 and against the outer surface of the side wall 16 through the connecting wall 29, noting that the outward and upward positioning of the base outer side wall 16 places the free edge 17 thereof laterally outwardly offset from lower portions of the closure outer side wall 28. Thus, the upward rise of the outer or second U-shaped section 24 of the closure 12 is to a great extent prevented should the container 10 be subject to accidental rough contact with other objects or should the container be dropped.

Turning now to FIGURE 2 of the drawings it should be particularly noted therein that there is provided on the bottom side of the base 11 a series of partitions 35 forming a number of compartments 36 for receipt of food-stuffs such as hors d'oeuvres or the like when the base of the present invention is utilized in its inverted position. In such inverted position, the base not only may be utilized as a serving tray but may further be utilized as a container wherein the closure 12 is adapted to sealingly engage secondary peripheral wall 19 in the manner as particularly shown in FIGURE 5 of the drawings. In this regard, it should be noted that the longitudinal distance of the second U-shaped section 24 of the closure is approximately equal to the longitudinal dimension of the secondary wall 19 wherein such is of a materially less depth than the height of the base outer side wall 16. In this manner then, sealing contact not only between the outer surface of the secondary wall 19 and the inner surfaces of the second U-shaped section 24 is accomplished but furthermore, the interconnecting wall 27 is placed in abutting contact with the connecting wall 18 of the rim 15 so as to form a secondary seal when the container of the present invention is utilized in its inverted position in conjunction with the closure.

The outer second U-shaped section 24 is further provided with a terminal flange 31 formed as an extension of the outer side wall 28 for convenience in removal of the

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closure from the base both in its upright and inverted positions. It should be further noted that such flange 31 is constructed so as to remain inwardly offset from the flange 20 so as to be further protected from dislodgment should the container be subject to rough handling or drop-page.

Turning now to FIGURES 6 through 9 of the drawings, the structure of the carrying means of the present invention is more clearly set out. Each of the handles 21 when the base 11 is in upright position is constructed so as to outwardly and slightly upwardly extend from the flange 20. The handles are generally of an equal thickness throughout their extent as such configuration is particularly adapted to the injection molding process by which the container of the present invention is formed although not limited thereto, and accordingly, a peripheral ledge 40 has been provided thereon with which the fingers of the user may be placed in secure contact for transport as best shown in FIGURE 8 of the drawings. FIGURE 9 of the drawings shows the relationship of the finger of the user shown in phantom with the uninterrupted top portion 41 of the handle 21 when the base 11 is utilized in inverted position. Thus, by upwardly and outwardly orientating the handles 21 when the base is in upright position, the top surface 41 which will be lowermost in the inverted position of the base presents an undercut area for ease in grasping by the user. In this manner then, the multiple use of the container base both in upright and inverted positions is facilitated.

A harness 45 may also be utilized to transport the container of the present invention. Such harness comprises a bail section 46 having handle engaging loops 47 at either end thereof. The handles 21 are further provided with insets 48 at either side thereof for receipt of the loops 47 of the harness 45. Accordingly, a novel harness supporting arrangement which provides for transport of the base of the present container in both its upright and inverted position is achieved. The harness 45 is preferably formulated of a relatively soft and deformable plastic such as low-density polyethylene while as aforementioned the handles 21 which are part of the base 11 are relatively stiff and inflexible. Accordingly, a higher degree of frictional contact is afforded between the harness loop 47 and the respective handles 21 with which it engages.

Upon reviewing a description of the various aspects of the invention, it may be seen that novel and advantageous provision has been made for carrying out the desired objects. However, attention is directed to the fact that other variations may be made in the example container disclosed herein without departing from the spirit and scope of the invention such as by the alternate formation of the closure portion of the present invention of a relatively stiff and inflexible material, while forming the base portion thereof from the flexible and deformable material. Accordingly, it should therefore be understood that the invention may be practiced otherwise than specifically described but within the scope of the appended claims.

I claim:

1. A container comprising a base and closure therefor wherein one of said above components is formed of a relatively stiff and rigid plastic material and the other is formed of a relatively deformable and resilient plastic material,

said base having an upwardly directed generally U-shaped peripheral rim comprising spaced inner and outer side walls,

said outer side wall upwardly terminating in a free edge and being outwardly directed so that said base rim presents an entrance opening of upwardly increasing width,

said closure having a peripheral rim in substantial fluid-tight sealing engagement with said base rim,

said closure rim having a first upwardly directed U-shaped section comprising spaced inner and outer side walls and a connecting wall,

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a second downwardly directed U-shaped section outwardly of said first section comprising spaced inner and outer side walls and a connecting wall, and said first closure section being integrally connected to said second closure section by means of a common wall consisting respectively of said first section outer wall and said second section inner wall.

2. A container comprising a base and closure therefor wherein said base is formed of a relatively stiff and rigid plastic material and said closure is formed of a relatively deformable and resilient plastic material, said base having an upwardly directed generally U-shaped peripheral rim having an outer wall outwardly upwardly terminating in a free edge,

said closure having a peripheral rim comprising an inner upwardly directed first U-shaped section and an outer downwardly directed second U-shaped section integrally connected thereto by means of a common side wall,

said first closure section received by said base U-shaped rim and resiliently deformably wedged between, and said second closure rim section in over-all contacting receipt of said base rim outer wall wherein lower portions of the outer wall of said second closure rim section are positioned inwardly of upper portions of said base rim outer wall in such a manner so as to prevent accidental upward movement of said second closure rim section and undesirable resultant loosening of said wedged relationship between said first closure rim section and said base rim.

3. A container comprising a base and closure therefor wherein said base is formed of a relatively stiff and rigid plastic material and said closure is formed of a relatively deformable and resilient plastic material,

said base having an upwardly directed generally U-shaped peripheral rim comprising a downwardly outwardly directed inner side wall and an upwardly outwardly directed outer side wall connected thereto, said outer side wall terminating in a free edge,

said closure having a peripheral rim including an inner side wall, an intermediate side wall connected thereto and an outer side wall joined to said intermediate side wall by means of an upper connecting wall so as to present an inner upwardly directed generally U-shaped section and an outer downwardly directed U-shaped section,

the upper outer lateral extent of said closure first U-shaped section being initially greater than the upper inner lateral extent of said base U-shaped rim prior to the interconnection of said base and closure,

and said closure intermediate side wall being inwardly deflected toward said closure inner side wall by said base outer side wall and said closure outer wall being inwardly urged against outer surface portions of said base outer side wall by means of said inward deflection of said closure intermediate side wall action through said connecting wall when said base and closure are interconnected.

4. A multiple use container comprising a base and closure therefor wherein said base is formed of a relatively stiff and rigid plastic material and said closure is formed of a relatively deformable and resilient plastic material, said base having an upwardly directed generally U-shaped peripheral rim comprising a downwardly outwardly directed inner side wall and an upwardly outwardly directed outer side wall connected thereto by means of a laterally extending connecting wall, said outer side wall terminating in a free edge,

a downwardly outwardly extending secondary wall in-

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tegrally extending beneath said connecting wall generally opposite said outer side wall,

said secondary wall being of a lesser longitudinal extent than said outer side wall,

5 said closure having a peripheral rim having a first upwardly directed U-shaped section and a second downwardly directed U-shaped section outwardly of said first section wherein said second U-shaped section is alternatively engageable with said outer side wall of said base U-shaped peripheral rim and said base downwardly extending secondary wall, and said second downwardly directed U-shaped section is of a longitudinal extent approximately equal to that of the base secondary wall.

5. A multiple use container comprising a base and closure therefor wherein said base is formed of a relatively stiff and rigid plastic material and said closure is formed of a relatively deformable and resilient plastic material,

said base having an upwardly directed generally U-shaped peripheral rim comprising a downwardly outwardly directed outer side wall connected thereto by means of a laterally extending connecting wall,

said outer side wall terminating in a free edge, a downwardly outwardly extending secondary wall integrally extending beneath said connecting wall generally opposite said outer side wall,

said secondary wall being of a lesser longitudinal extent than said outer side wall,

30 said closure having a peripheral rim having a first upwardly directed U-shaped section and a second downwardly directed U-shaped section outwardly of said first section wherein said second U-shaped section is alternatively engageable with said outer side wall of said base U-shaped peripheral rim and said base downwardly extending secondary wall,

said second downwardly directed U-shaped section being of a longitudinal extent approximately equal to that of the base secondary wall,

40 and a generally planar handle extending from opposite sides of said base longitudinally intermediate said outer side wall and said secondary wall,

said handle being upwardly outwardly directed from said outer side wall and having opposed inset portions proximate said walls for receipt of a harness member.

6. A multiple use container comprising a base and carrier means therefor,

50 said base having a handle upwardly outwardly extending from the periphery of said base at either end thereof,

said handles being opposed to each other and having a generally planar upper surface,

said handles further having a peripheral ledge downwardly extending from said upper surface which ledge is engageable by the user's fingers when said base is utilized in an upright position, and wherein said handles present a laterally undercut lower planar surface engageable by the user's fingers when said base is utilized in an inverted position.

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