July 4, 1967 P. DEMAS 3,329,298

COLLAPSIBLE WASTE RECEPTACLE

Filed Sept. 23, 1966

Fig. 1

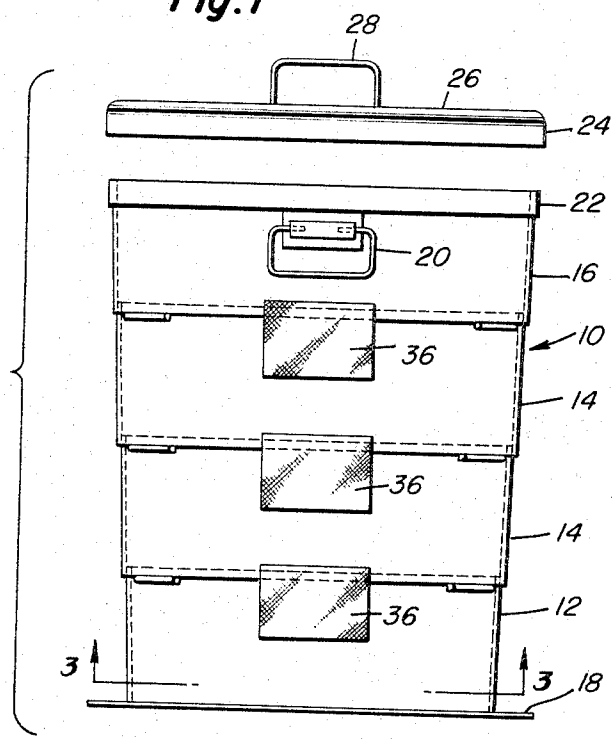


Fig. 4

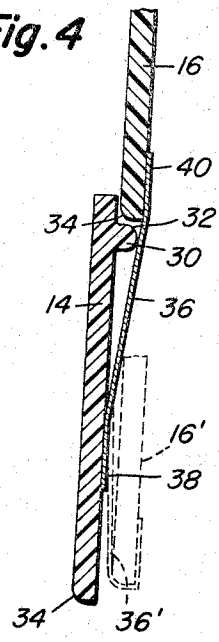


Fig. 3

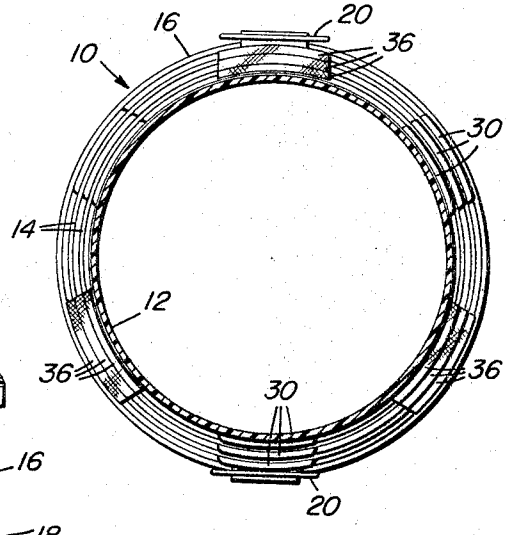
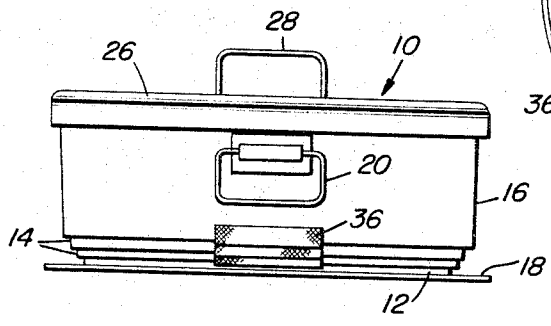


Fig. 2



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COLLAPSIBLE WASTE RECEPTACLE

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This invention relates to a collapsible waste receptacle or container, and has for an object to provide an improved container which can be telescoped or collapsed into a small amount of space, and then may be readily extended to its maximum size.

A further object of this invention is to provide a collapsible container which may be extended for use as a waste basket or receptacle, or for use as a shipping container, or for any other suitable container use, and which in collapsed condition, may be stored or shipped in a minimum of space, and when desired for container use, may be readily extended to operative position.

A further object of this invention is to provide a collapsible container which may be made in any desirable size, and which includes a bottom closure affixed thereto and a top cover which may be removably used therewith.

A further object of this invention is to provide a collapsible container which is readily storable or shippable in in minimum, collapsed size, and is readily extendable to usable condition.

In brief, this collapsible container or telescopic waste basket or receptacle consists of a plurality of annular bands of progressively increasing size made of substantially rigid but slightly flexible material, such as a suitable plastic or the like, with a bottom closure member secured to the lowermost, smallest band, this closure member extending in a flange outside the band to provide a base, a cover receiving outwardly extending rim at the top edge of the outermost, topmost band, the top band also having hinged handles secured thereto at 180 degrees apart. Each band, except the top band, is provided on its outer surface with a plurality of spaced apart beads, spaced preferably at 120 degrees, adjacent to but somewhat spaced from its top edge, the circumference about the beads of each band being somewhat larger than the internal bottom circumference of the larger sized band but the material of the band being sufficiently flexible to permit the larger band to pass thereover under pressure in either direction, so that when the larger band is extended above the smaller band, the beads act as supporting ridges.

Flexible straps secured at one end to each band except the largest in the area of its outside surface mid line and to the outside surface of the next larger band, act as extension limiting means to prevent the bands from complete separation, so that the bands may support themselves on the projecting ridges provided by the beads, and then the bands are collapsed or telescoped over each other, the same flexible straps limiting the telescoped larger bands from telescoping below the smaller bands. The straps and beads are spaced equally about the circumference, alternating with each other, preferably equally at 120 degrees between the straps and between the beads.

A lid or cover, with a handle on its top, has a depending flange which may be extended down over the top band outwardly extending rim, and in view of the material, may be sized to snap fit thereover, yet be readily separable when pulled up by its handle.

The top band is also provided with a pair of container handles, spaced apart at 180 degrees. It may be made in any suitable size, with any suitable number of bands, depending on the use for which it is intended. As a waste basket or receptacle, with four bands as illustrated, each band may be six and three-eighths inches in height, with a total overall height of about twenty-four inches from

base to cover, and about seventeen inches inside diameter at the base, the beads being located three-eighths inch below the top edge of the bands. The straps are about five inches long. Other sizes for the same or other uses may be made as desired.

With the above and related objects in vew, this invention consists in the details of construction and combination of parts, as will be more fully understood from the following description, when read in conjunction with the accompanying drawing, in which:

FIG. 1 is a side elevational view of the collapsible container in extended position, the cover being shown thereabove.

FIG. 2 is a side elevational view in collapsed or telescoped position.

FIG. 3 is a sectional view on line 3—3 of FIG. 1.

FIG. 4 is a composite sectional view, on an enlarged scale, partly through a bead and partly through a connecting strap, of two adjacent bands.

There is shown at **10** the collapsible container or waste basket or receptacle of this invention. The container **10**, as shown, may be made of a suitable rigid, yet lightly flexible, plastic material, and includes a bottommost annular band **12**, one or more intermediate annular bands **14** and topmost band **16**. Each band, from the bottom toward the top, is progressively larger in size, so that they be telescoped to the position shown in FIG. 2, or extended into operative, container providing position shown in FIG. 1.

The annular bands **12**, **14** and **16** may be cylindrical, or may preferably be frusto-conical as shown. The bottom band **12** is provided with a bottom closure member extending in a flange **18** thereabout at its lower edge providing a stabilizing base for the container **10**, the diameter of the base flange **18** being preferably at least as large as the diameter of the top band **16**.

The top band **16** has a pair of pivoted rectangular handles **20** spaced 180 degrees apart; the top band **16** also has an outwardly and downwardly extending rim **22** over which may be snap fitted the downwardly extending flange **24** of a cover member **26** provided at its top center with a handle **28**.

The bottom band **12** and each intermediate band **14** is provided with a plurality of spaced apart beads **30**, preferably three in number and spaced apart equally at 120 degrees. The beads are located adjacent to but spaced from the top edges of the bands **12** and **14**, for example, about three-eighths inch below their top edges, and project outwardly a distance almost equal to the thickness of the bands. Thus, the outer circumference about the beads **30** is somewhat greater than the inner bottom circumference of the next upper band. The beads **30** are rounded, as shown at **32**, and the lower inner edges of the intermediate and top bands **14** and **16** are similarly rounded as shown at **34**. The band material being somewhat flexible, the intermediate and upper bands **14** and **16** may be moved over the beads **30** in either direction under pressure.

Flexible straps **36**, equally spaced 120 degrees about each bottom and intermediate band **12** and **14**, are secured thereabout at about a mid line area at one end, at **38**, and at their other end, are secured to the next upper intermediate and top bands **14** and **16** adjacent their lower edges as shown at **40**. As thus secured, the flexible straps **36** limit the separation of the bands in either direction.

In the extended position, the ridges provided by the beads **30** support the upper band thereon while the straps **36** prevent the adjacent bands from completely separating as shown in FIG. 4. In the telescoped or collapsed position, the rounded edges **34** permit the upper band to more readily compress the next lower band and rides thereover to the position shown at **16'**, and the band is supported by the strap at **36'**, in addition to the fact that the

beads **30** exert frictional contact on the inner sides when the bands are cylindrical or lighter frictional contact when they are frusto-conical as shown, to hold the bands together in telescoped or collapsed position.

In operation, to extend the collapsed container from the position shown in FIG. 2, one places one's feet on the base flange **18** and pulls up on the handles **22**, causing the bands to ride up over the ridges provided by the beads **30** to the supporting position thereon shown in FIGS. 2 and 4. To collapse or telescope the container **10** when in the extended position shown in FIG. 1, one presses down on the top edge of upper band **16**, causing the rounded edge **34** to ride down over the rounded edge **32** of the beads **30** to the position shown in FIG. 2. In both operations, the cover **26** shown may be left off to prevent causing resisting vacuum or air pressure therewithin.

In the drawings, like numbers refer to like parts, and for the purposes of explication, set forth below are the numbered parts of the improved collapsible waste receptacle:

10—container
12—bottom annular band
14—intermediate annular bands
16—topmost annular band
16'—telescoped position
18—bottom closure member and base flange
20—handles on **16**
22—outwardly, downwardly extending flange on **16**
24—downward flange of cover **26**
26—cover
28—handle on **26**
30—beads
32—rounded edge on beads **30**
34—rounded inner bottom edge on bands **14** and **16**
36—flexible straps
36'—band supporting position of **36**
38—strap end secured at mid line area of bands **12** and **14**
40—strap end secured near bottom of bands **14** and **16**

Although this invention has been described in considerable detail, such description is intended as being illustrative rather than limiting, since the invention may be variously embodied, and the scope of the invention is to be determined as claimed.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

1. A collapsible container comprising a plurality of telescopic bands of progressing increasing size, flexible means secured at one end to each band except the largest at a plurality of points thereabout, such points being located at substantially not lower than a mid line thereabout, each said flexible means being secured at its other end to the outside of the next progressively larger band limiting the telescopic separation of said bands thereof to less than complete separation in either direction, and outwardly projecting means adjacent but below the top edge of each band except the largest for supporting the next larger band when in extended position, said bands being of sufficiently flexible material permitting each band to compress sufficiently to permit its next larger band to pass over its outwardly extending supporting projecting means in either direction under pressure, and a container bottom wall secured to the smallest band.

2. The container of claim **1**, and an outwardly downwardly extending top rim or flange on said largest band, and a container cover extendable down over said rim flange.

3. The container of claim **1**, said flexible secured means comprising a plurality of flexible straps spaced about said bands.

4. The container of claim **1**, said outwardly projecting means comprising a plurality of beads spaced about said bands.

5. The container of claim **1**, said flexible secured means comprising a plurality of flexible straps equally spaced about said bands, said outwardly projecting means comprising a plurality of beads equally spaced about said bands between said plurality of straps, said beads providing supporting ridges for each progressively larger band when in extended position.

6. The container of claim **5**, there being at least three straps and at least three band supporting beads spaced substantially one hundred twenty degrees about its beads, said straps and beads alternating thereabout.

7. The container of claim **5**, said container bottom wall having a container stabilizing flange extending outward of said smallest band to which it is secured.

8. The container of claim **7**, and hinged handle members pivotally secured to said largest band spaced one hundred eighty degrees apart.

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