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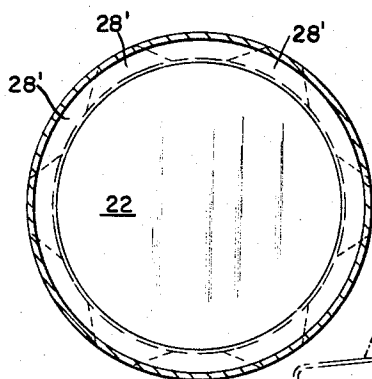


FIG. 2.

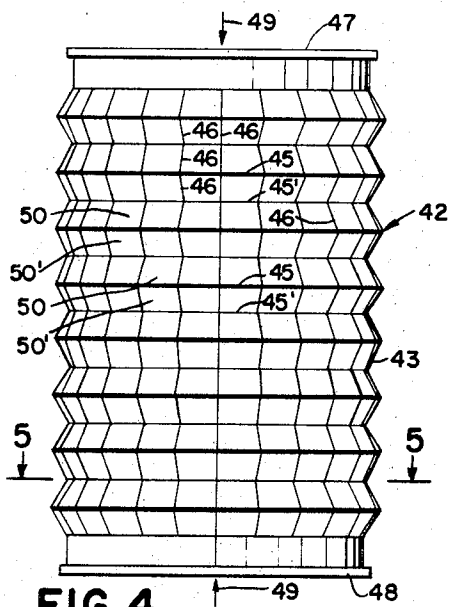


FIG. 4.

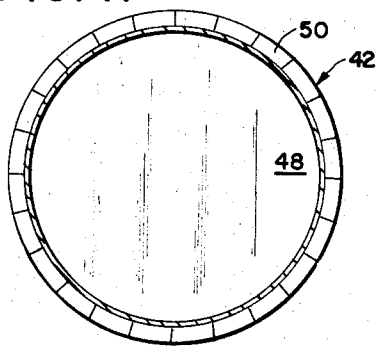


FIG. 5.

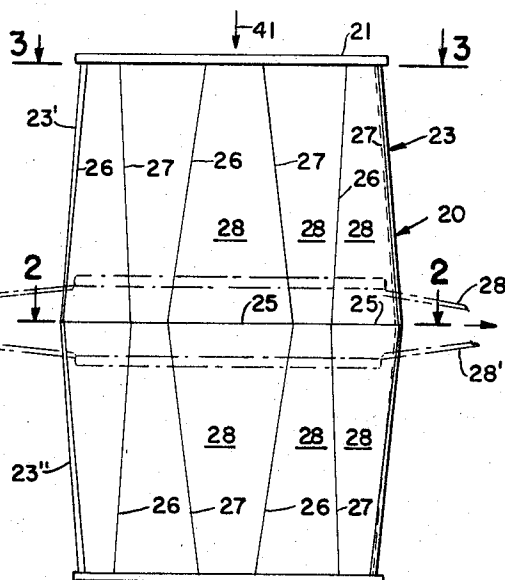


FIG. 1.

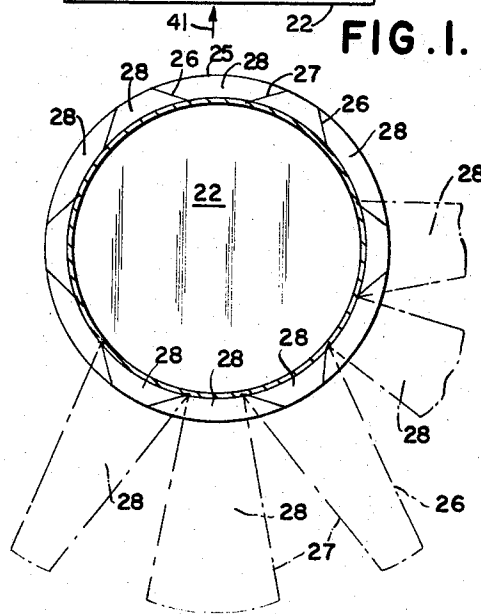


FIG. 3.

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ABSTRACT OF THE DISCLOSURE

The invention is a collapsible can comprising a pair of end caps with an annular wall between the end caps having a frusto-conical conformation forming a centrally annular ridge. The wall has an annularly cut line about said annular ridge and a plurality of transverse cut lines extending transversely from the annular cut lines to said end caps. The cut lines being cut only partly through the thickness of said wall so as not to puncture the wall, and said can being adapted to receive pressure at its end caps to force the end caps together and fold the wall radially outward about the annular cut line and fracture along the transverse cut line.

This invention relates to containers more particularly, it relates to cans or containers and to their disposal after use.

It is an object of the invention to provide a novel can or container which can be collapsed after use, so as to occupy a minimum amount of space.

It is a further object of the invention to provide a novel collapsible container or can which may be collapsed with only a moderate amount of pressure after use.

It is a further object of the invention to provide a novel can which can be collapsed by pressing the ends of the can axially toward one another.

Further objects and advantages of the invention will become apparent as the description proceeds and when taken in conjunction with the accompanying drawing wherein:

FIGURE 1 is a side elevational view of the preferred form of collapsible can, with a fragmentary illustration of the can in collapsed position shown in phantom lines.

FIGURE 2 is a cross-sectional view of the preferred form of collapsible can taken along line 2-2 of FIGURE 1.

FIGURE 3 is a cross-sectional view of the preferred form of collapsible can taken along line 3-3 of FIGURE 1, with a fragmentary showing in phantom lines of the can in a collapsed position.

FIGURE 4 is a side elevational view of a modified form of collapsible can.

FIGURE 5 is a cross-sectional view of the modified form of collapsible can taken along line 5-5 of FIGURE 4.

Briefly stated, the invention comprises a metal can or container having lines cut along the surface of the can dividing the can into sections with the lines running lengthwise of the container and annularly around the container and with the can having annular walls forming an upper frusto-conical conformation and a lower frusto conical conformation, so that when pressure is applied to the ends of the container, the can will fracture along the cut lines and collapse the ends to the can toward one another.

Referring more particularly to the drawings, in FIGURE 1 the preferred form of collapsible can invention 20 is illustrated having conventional metal ends 21 and 22 secured to an annular wall 23 in a conventional manner. The annular wall 23 has an upper frusto-conical portion 23' and a lower frusto-conical portion 23'' in apposed relation so that the can tapers outward to the center. A

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line 25 is cut annularly about the center of the can. The line 25 is cut only partly through the thickness of the metal wall so as not to puncture the wall. The annular wall 23 also has cut lines 26 and 27, which extend lengthwise of the longitudinal axis of the can and are positioned at angles to one another.

The lines 25, 26, and 27 together with the end cap 21 define twelve upper sections 28 along the upper frusto conical portion 23', with every other section approximately the same size. The lines 25, 26, and 27 together with the end cap 22 also define or form twelve lower sections 28' along the lower frusto-conical portion, with every other section approximately the same size.

The cut lines 25, 26, and 27 are cut only partly through the thickness of the wall, from the extension, consequently the can is air tight once it has been capped by the ends 21 and 22.

The can 20 is collapsed by applying pressure against the ends of the caps 21 and 22, axially toward one another (in the direction of arrows 41). Since the can is bowed or tapered outward along the center line 25, the pressure causes the sections 28 and 28' to fold outward fracturing and separating along lines 26 and 27 and also along line 25.

The sections 28 and 28' will flare outward and fold toward one another, generally as illustrated in phantom lines in FIGURES 1 and 3. FIGURES 1 and 3 under the sections 28 and 28' are relatively close to one another, thus greatly reducing the value of the can.

The pressure causes the line 26 and 27 to fracture or separate first.

It is intended that the cans be precut with the lines 25, 26, and 27 already cut into the can before the can is commercially filled with the commodity it is intended to be used for, such as beer.

The cans 20 have a larger circumference, centrally of their length, along line 25, than about the end caps to assure that the sections 28 and 28' will fold outward when pressure is applied.

FIGURES 4 and 5 illustrate a modified form of the can invention 42. The modified form 42 has an annular wall 43 formed in a general accordin shape with a plurality of tapered annular ridges 44 forming the accordin shape.

A plurality of annular lines 45 and 45' are cut about the top and the base of each ridge 44 and a plurality of radial cut lines 45 are cut into the ridges 44 at even intervals about the circumferences of the ridges. The lines 45 and 45' and lines 46 define a plurality of sections 50 and 50' along the ridges about the annular wall 42.

The modified can invention 42 also has conventional end caps 47 and 48 secured to the ends of the annular wall 43 in a conventional manner.

The modified can invention 42 is collapsed by applying pressure to the end caps in a direction axially toward one another (indicated by the arrows 49) so as to force the end caps axially toward one another. The forcing of the end caps toward each other causes the can to fracture along lines 46 and forcing the sections 50 to separate along line 46 and also forcing the sections 50 and 50' to fold outward in the similar manner to that illustrated in FIGURES 1 and 3 with respect to the preferred form.

The fracturing and separating along lines 46 and the forcing of the sections 50 and 50' to fold outward causes each annular cut line 45 and 45' to move closer to one another, until the sections 50 and 50' are folded relatively close to one another, thus greatly reducing the volume of the can.

The can may also fracture along the annular lines 45 and 45'.

The annular cut lines 45 and 45' and the radial lines 46 are cut only partially through the thickness of the annular wall 43, so as not to penetrate through to the in-

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terior of the can. Thus the can 42 is air tight. Once the end caps have been mounted and the annular wall has no perforations or openings until such time as the collapsing pressure applied, causes the wall to separate along the cut lines.

Thus it will be seen from the foregoing that a novel can construction has been provided which enables a metal can to be collapsed along cut lines to occupy a relatively small volume of space in relation to its uncollapsed position, consequently the can when collapsed will occupy less space in garbage disposals or wherever the can is deposited after use.

The cans in both the preferred form illustrated in FIGURES 1-3, and in the modified form illustrated in FIGURES 4 and 5 may be made out of material such as aluminum, tin, steel, or other metals or plastics or other suitable materials. Also, the sides of the container may form a rectangular shape rather than annular with each of the sides bowing out.

It will be obvious from the foregoing that various changes and departures may be made to the invention without departing from the spirit and scope thereof and accordingly it is not intended that the invention be limited to that specifically described in the specification illustrated in the drawing but only as set forth in the appended claims wherein:

What is claimed is:

1. A collapsible can comprising a pair of end caps, an annular wall, said annular wall forming a pair of frusto-conical sections in opposed relation with the larger circumference of the sections disposed centrally of the sections and the smaller circumference of said sections disposed adjacent the ends of the can, said wall having an annular cut line in said wall annularly disposed about the larger circumference of the sections and a plurality of diagonal cut lines disposed transversely of said annular

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cut line and diagonally of one another, said can being adapted to receive pressure at said end caps to force said end caps together and cause said can to fracture along said cut lines.

2. A can comprising a pair of end caps, an annular wall between said end caps having an opposed frusto-conical conformation forming a centrally annular ridge, said wall having an annularly cut line about said annular ridge, and a plurality of transverse cut lines extending transversely from said annular cut line to said end caps, said lines being cut only partly through the thickness of said wall so as not to puncture the wall, said can being adapted to receive pressure at its end caps to force the end caps together and fold the wall radially outward about the annular cut line and fracture along the transverse cut line.

3. A can comprising a pair of end caps, an annular wall bowing out from said end caps, said end caps forming a central annular ridge, said wall having an annular cut line along the peak of said ridge and transverse cut lines extending between said annular cut lines and said end caps, said lines only being cut partially through the thickness of said annular wall so as not to puncture the wall, said can being adapted to receive pressure at its end caps to force the end caps together and fold the wall radially outward about the annular cut line and fracture along the transverse cut line.

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