

[54] **PLASTIC END CAP AND PAPER BODY ATTACHMENT**

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[51] Int. Cl. **B65d 3/12**

[58] Field of Search **229/5.5, 5.8, 43**

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[57] **ABSTRACT**

A plastic end cap for a tubular container body for capping the ends of the body. The cap has a center panel portion and a peripheral rim of U-shape cross-section having inner and outer parallel side walls and an interconnecting transverse end wall defining a groove for admitting an end edge portion of the container body. The side walls are provided with opposed dimples which project into the groove and are adapted to pinch and tightly hold without adhesives the end edge portion of the container body and to maintain the same in centered relation spaced from the side walls to provide passageways for hot melt cements such as microcrystalline waxes to flow unobstructively along the inner and outer sides of the end edge portion and thus provide a good seal. The dimples or projections are centered between the top and bottom edges of the side walls of the groove so that the cement will flow above and below them to provide a continuous perimetric seal.

9 Claims, 4 Drawing Figures

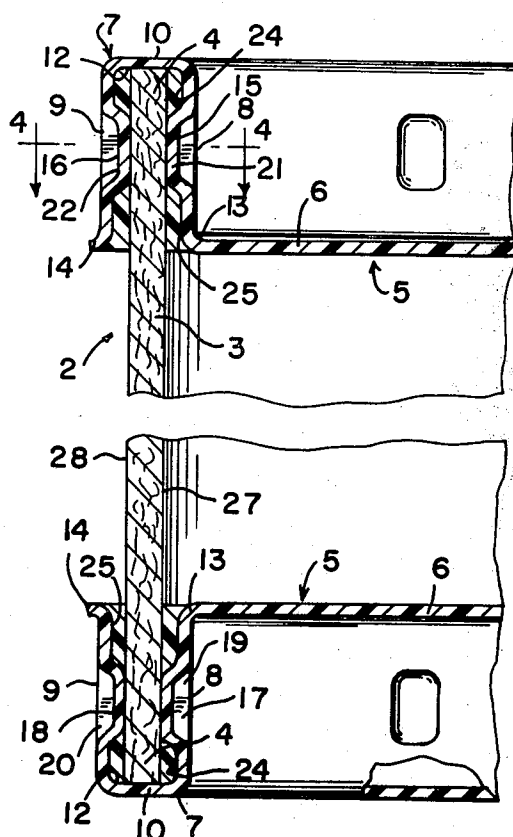


FIG. 1

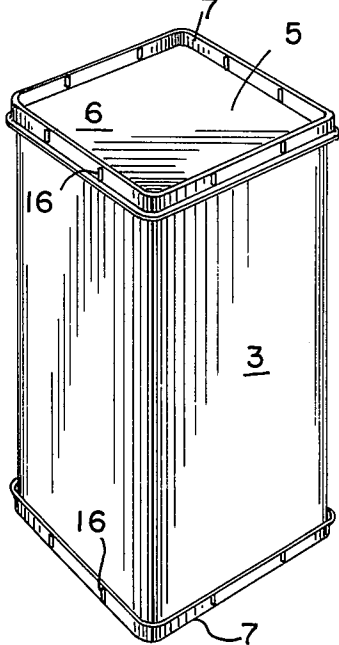


FIG. 2

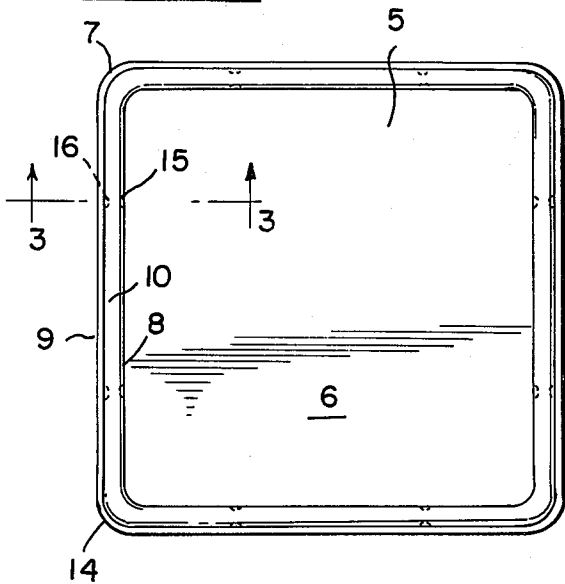


FIG. 3

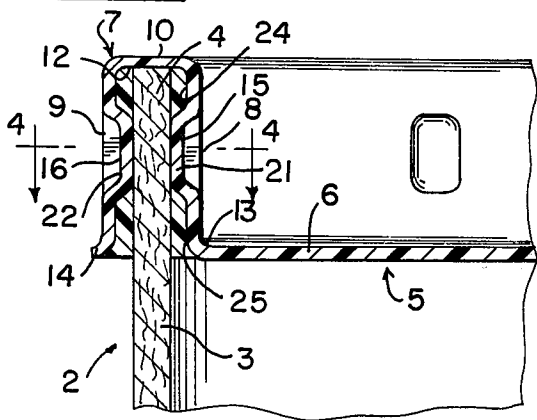
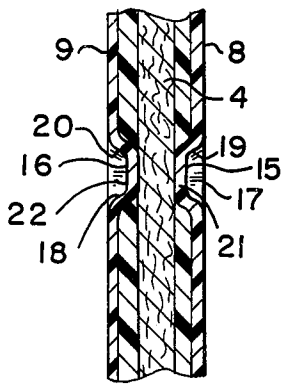
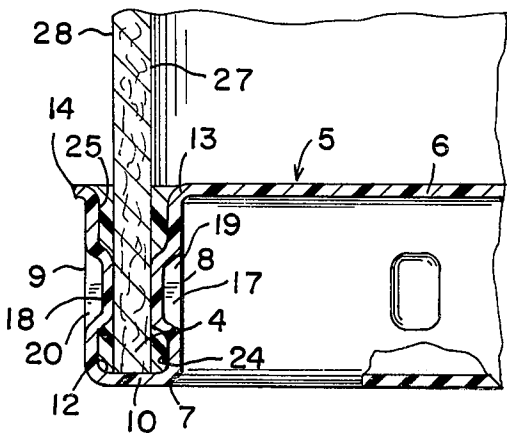


FIG. 4



PLASTIC END CAP AND PAPER BODY ATTACHMENT

DISCUSSION OF THE PRIOR ART

It has been found that plastic end caps which are attached to container bodies by hot melt cements, when subjected to heat of 140° to 180° F detach due to the weight of the product in the container when they become unfrozen and the sealing compound becomes liquid. Furthermore, in the construction heretofore encountered the sealing compound is the only connection between the end cap and the container body so that prior to cementing the caps are not assured of centering on the body so that the sealing compound can flow freely along opposite sides of the body to provide a good seal.

SUMMARY OF THE INVENTION

This invention relates to end closures and more specifically to a novel combination centering and holding means for an end cap.

A specific object of the invention is to provide a novel end cap having a peripheral body-receiving groove defined by opposed wall portions which are provided with opposing protuberances adapted to grasp the body portion therebetween in spacial relation to the wall portions to thereby provide a passageway for the sealing compound to flow under and about opposite sides of the container body edge to provide a good seal.

These and other objects and advantages inherent in and encompassed by the invention will become more apparent from the specification and the drawings wherein:

FIG. 1 is a perspective view of a container incorporating the invention;

FIG. 2 is an enlarged end view of the container;

FIG. 3 is a further enlarged broken-apart cross-sectional view taken substantially on line 3—3 of FIG. 2; and

FIG. 4 is a sectional view taken substantially on line 4—4 of FIG. 3.

DESCRIPTION OF THE INVENTION

The invention is disclosed in connection with a square shaped container generally designated 2 which comprises a paperboard body portion 3 preferably formed of paper and either wax sealed or lined with foil or plastic material such as polyethylene film.

The end edge portions 4, 4 of the container body are closed by end closures 5, 5 each of which is made of plastic material such as polyethylene. Each closure 5 has a central square-shaped panel portion 6 and a peripheral locking edging 7.

The edging 7 comprises a pair of inner and outer opposing parallel side walls 8, 9 and an outer edge interconnecting web portion 10 which with walls 8 and 9 forms a U-shaped groove 12. The inner wall merges in a radius portion 13 at its inner edge with the peripheral edge of the panel portion 6 and the outer wall has its inner edge formed with an arcuate out-turned flange 14. The radius portion 13 and flange 14 define guiding means for guiding the entry of the respective body end edge portion 4 into the groove 12.

Intermediate the inner and outer edges of the side walls there are provided on the side walls 8 and 9 opposing nibs or projections 15, 16 each of which is of hollow construction being dished at 17, 18 on their ex-

ternal sides and having inwardly converging side portions 19, 20 which merge into the respective edges of a preferably flat rectangular node portions 21 and 22. The node portions 21, 22 of opposing nibs firmly grasp and bear against the opposing areas of the related end edge 4. Since the end cover or closure is formed of plastic the yielding or resilient nature thereof provides a bias to the nibs to tightly grasp the edge. It will also be seen that by limiting the extent of the nibs axially as well as circumferentially the channels 24, 25 are formed inwardly and outwardly thereof are continuous to permit the sealing compound such as microcrystalline wax, which is heated to a fluid state, to be poured into the groove and unobstructively to flow through the channels 24 and 25 and about the nibs completely sealing the joint.

Where necessary, appropriate heated clamps or clamping tools may be used which grasp the edging portion in the nib areas and melt the plastic and fuse it to the plastic coating 27, 28 on the inner and outer sides of the container body as shown in FIG. 4. Also if required these clamps may apply sufficient force to indent the paperboard and thus provide a mechanical interlock with the body edge portion. Further by heating the thermoplastic material the same can be caused to bond to the paper or plastic coating on the paper.

What is claimed is:

1. An end closure for a can body having a peripheral end edge portion, said closure being formed of plastic material and having a peripheral edging for axially telescoping over said edge portion, said edging comprising a pair of opposed walls and an intervening web defining an edgeportion admitting groove, a plurality of aligned opposing small nibs projecting from said walls into the groove and spaced lengthwise of the groove adapted for grasping engagement with the edge portion of an associated can body and operative to hold said walls apart in spacial relation to provide passage means between the walls and sides of the can body for reception of sealing compound therein on both sides of said edge portion.

2. An end closure according to claim 1 and said nibs being spaced from the inner and outer edges of said walls.

3. The invention according to claim 2 and said outer edges of the walls being formed with curved portion for guiding the associated end edge therein.

4. The invention according to claim 3 and said nibs having side webs inwardly and having generally flat inner end node.

5. The invention according to claim 4 and said nibs being dished and relatively rigid with respect to said walls.

6. The invention according to claim 5 and said cover being formed of thermoplastic material and said nibs being meltable for bonding adherence to the container body walls.

7. The invention according to claim 7 and said end closure being made of polyethylene.

8. The invention according to claim 1 and said closure having a channel offset inwardly with respect to the edging.

9. The invention according to claim 1 and a container body having thermoplastic lining on said edge portions, and said nibs being of thermoplastic material and heatable to bond to said lining.

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