Sept. 27, 1966 K. D. BIXLER 3,275,134

LABEL PACK

Filed July 17, 1964

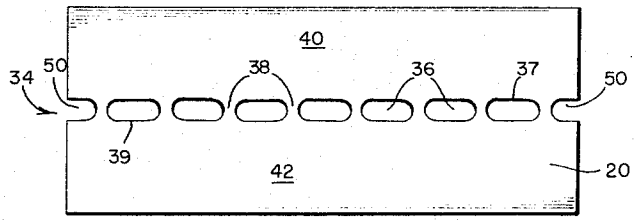


FIG. 1

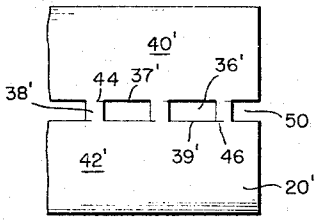


FIG. 2

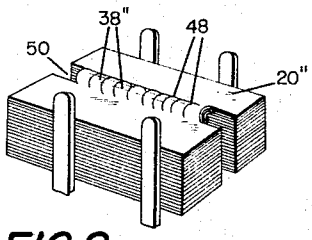


FIG. 9

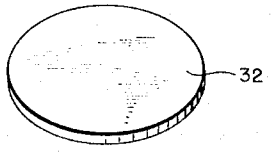


FIG. 3

FIG. 4

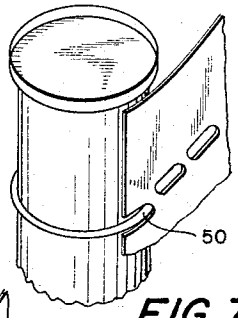


FIG. 7

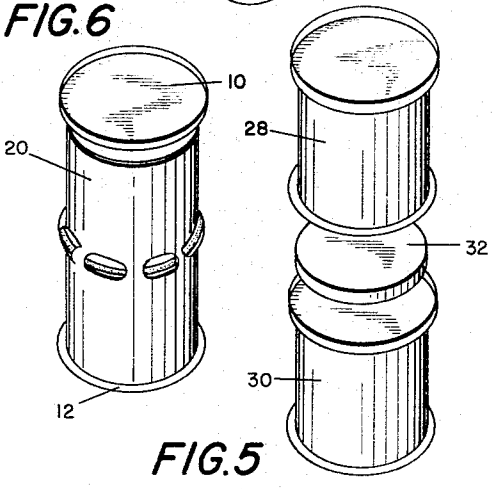


FIG. 5

FIG. 6

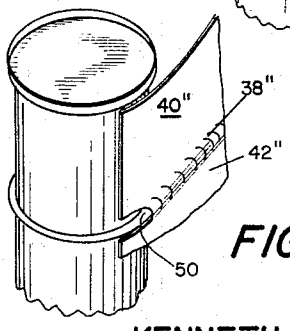


FIG. 8

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LABEL PACK

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The present invention relates to label packs and more particularly to packages comprising end to end containers held together by a single label which may be easily parted for separating the containers.

Until the present time multi-unit packs have been provided by utilizing a paperboard carrier in which a plurality of bottles or cans is assembled. Cans have also been assembled into a multi-pack by sealing the cans end to end with an adhesive strip. Such prior art multi-packs have the disadvantages of increasing the cost of packaging due to the necessity of utilizing extra material (e.g. adhesive tapes and/or paperboard carriers) and additional packaging steps.

It is therefore, an object of the present invention to provide a novel label pack which obviates the aforementioned disadvantages of the multi-unit packs of the prior art.

It is another object of the present invention to provide an economical method of combining two or more cans into a multiple unit pack from which pack the individual unit cans can be easily separated for use.

It is another object of the present invention to provide a label pack and method which are simple and economical and which utilize conventional high speed labeling equipment with minimum machine modification.

It is another object of the present invention to provide a label pack having superior display properties over other multi-packaging systems.

It is another object of the present invention to provide a neat, tight fitting label around chimed can type of containers which label unites such chimed cans in end to end relationship.

It is another object of the present invention to provide labels having novel structure utilized for uniting containers in end to end relationship.

These and other objects and the nature and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawings wherein;

FIG. 1 is a plan view of one modification of a label of the present invention;

FIG. 2 is a fragmentary plan view of another embodiment of the label of the present invention;

FIG. 3 is a perspective view of a die cut disc utilized in certain embodiments of the present invention;

FIG. 4 is a perspective schematic step assembly of applying a label of the present invention to produce a package of the present invention;

FIG. 5 is a perspective view showing the method of assembly to double chimed cans;

FIG. 6 is a perspective view of a completed package according to the present invention;

FIG. 7 is a perspective view showing the application of a label of FIG. 1;

FIG. 8 is a perspective view showing the application of another label embodiment; and

FIG. 9 is a perspective view of a stack of labels such as utilized in FIG. 8.

In accordance with the present invention labels may be applied to stacked cans in a manner similar to the methods for applying labels to single cans. Noting FIG. 4, for example, two drawn aluminum cans **10** and **12** each having one chime **14** and **16**, respectively, are nested as shown and conveyed in an upright position past a water

spraying device **18**. As cans **10** and **12** are contacted by water, a label **20** having adhesive at both ends **21–22** is removed from a label stack **24** and forced into contact with the end to end cans **10–12**. The assembled label pack is then conveyed past a heating and/or drying element **26** where all water is evaporated from the web label **20** and the adhesive **21–22** is activated or set. Alternatively, the water spraying device **18** and the drying element **26** may be disposed with if a contact or pressure sensitive adhesive is used; similarly, if the cans are hot or if means for heating the labels or cans are provided, a heat sensitive adhesive may be used in place of the water soluble adhesive.

In lieu of upright labeling equipment such as that schematically illustrated, a conventional horizontal type labeling equipment can be utilized. In order to insure proper nesting of one can on top of the other a series of confining bars (not shown) may be utilized. For horizontal operation the cans can be confined from the ends and rolled into contact with the label stack.

Drawn aluminum cans **10** and **12** provide no nesting problem since they nest naturally together each having only one chime **14** and **16** respectively. Double chimed cans **28** and **30**, on the other hand, (FIG. 5) may require the insertion of a die cut stay element **32** which may be formed of paperboard and which nests cans **28** and **30** in proper relationship. If desired the die cut stay **32** may contain printed matter such as directions, advertisements or recipes.

Label **20**, shown in detail in FIG. 1, is a paper strip preferably having a rectangular shape as shown. Running the length of label **20** and in the intended plane of the contacting cans the label **20** is provided with a weakened portion **34**. In the embodiment in FIG. 1 the weakened portion **34** comprises a series of cutout sections **36** which are defined by contact label webs **38** and cutout edges **37** and **39**. The contact label webs **38** may be considered connections between label section **40**, the label for can **10**, and label section **42**, the label for can **12**.

The FIG. 2 embodiment is similar to the label **20** of FIG. 1 except that the cutout portions **36'** are rectangular and the cutout edges **37'–39'** are extended as shown at **44** and **46**. In another label embodiment shown in FIGS. 8 and 9, the label **20''** has two halves **40''** and **42''** connected by contact label webs **38''**. As opposed to the other two embodiments, these contact label webs **38''** abut each other and are defined by diagonal slashes **48** therebetween. In each embodiment, however, the clearance cut **50** is provided at either and preferably both ends of the label.

During application of the label the stacked cans **10–12** contact the label stack **24** and the edge of the clearance cut **50** clears the chime **16** at the pack center and allows adhesive **22** to contact the can body to provide a firm label contact on each can **10–12** by each label part **40–42**, respectively. This is clearly illustrated in FIGS. 7 and 8. As the can pack continues rolling across the label stack **24**, the label **20** rolls around the can stack. When the label **20** starts around the can stack **10–12**, the wetting applicator **18** contacts label **20** thus wetting contact label webs **38**.

To facilitate the label wrapping tightly, the label **20** is held down at the trailing end (near adhesive **21**) while the can stack **10–12** continues to roll forward. As the label sustains tension against the cans, the wet areas (contact label webs **38**) pull out over the can chimes while the label areas **40** and **42** lay tightly against the can bodies. The application of the label is completed as the glue area **21** is rolled over and laps over the edge of the first deposited end of the label. The labeled can pack rolls past the heat source **26** which effects drying and shrinking of the web areas **38** thereby shrinking the pack

cans tightly together. The can chime **16** is now projecting outwardly into the cutout portions **36** between edges **37–39** and pushing the joining contact label webs **38** outwardly.

Separation of the unit into individual cans is accomplished by holding the bottom can stationary while twisting the top can clockwise. Ease of separation along with shipping and handling strength can be adjusted by an increase or decrease in the relative number of holding contact label webs **38** with a corresponding change in the width of each web **38** and a change in relationship of webs **38** to the cutout portions **36** between each web area **38**. Strength can also be adjusted by a change in paper stock. Cuts **44** and **46** of the FIG. 2 embodiment also provide simplified separation.

The present structure permits full edge adhesion to each can as well as of one end of the label to the other end. The clearance cuts at the beginning and end of each label permit the can chimes to fall into the cuts thus permitting the can body to contact the entire glued label surface. This provides a neatly applied tight fitting label around the cans and thus the present package provides a place for the larger chime diameter to fit when the label is snug on the lesser diameter of the body portion. The structure allows a maximum snugness of fit to each inside chime edge insuring a maximum hold on the can bodies against one another by the webs over the chimes.

The hashed cut embodiment of FIGS. 8 and 9 will also expand for chime difference diameter as described above. The cut **48** can be at substantially any angle as long as there is a deviation from in line perforations. Relative twisting of the cans will force diagonal cuts **48** to open and cause the webs to tear. While perforations in line will not displace to compensate for diameter differences, the angled line of cuts will displace outwardly giving the advantages of fit and structure described above. FIG. 9 shows such a label stack being squeezed in a feed hopper to preform webs **38''** to conform to the shape of the chime.

The present invention permits end to end uniting of cans economically on a high speed conventional labeling lines requiring a minimum machine modification. The present invention provides superior display over other multi-packing systems, since the label is in one piece and the copy displayed on the label is always consistent in direction due to the label orientation being consistent. The present label pack also provides easy separation in its individual cans by way of a simple twist; at the same time adequate strength to resist shipping and handling is provided.

It will be obvious to those skilled in the art that various changes may be made without departing from the scope of the invention and therefore the invention is not limited to what is described in the specification but only as indicated in the appended claims.

What is claimed is:

1. A package comprising:

a first cylindrical container;

a second cylindrical container positioned end-to-end coaxially with said first container and having generally the same peripheral length as said first container, said second container having a chime at the end thereof adjacent said first container; and

a single common label adhesively affixed to said containers to unite said containers in said end-to-end coaxial relation, said label having

(a) adhesive on two opposite edges thereof,

(b) a weakened portion of the plane of contact between said containers and intersecting said label portions having adhesive thereon, and

(c) a clearance cut along one of said adhesive coated edges at the end of said weakened portion, said chime extending through said clearance cut so that said chime extends beyond a plane tangent to said containers through said label portion having adhesive thereon.

2. A package in accordance with claim **1** wherein said containers are metal.

3. A package in accordance with claim **1** wherein said weakened portion of said label comprises a series of cutout sections defining a line of oblong holes extending in the direction of said weakened portion, each said hole being separated from its adjacent hole by a narrow section of label.

4. A package in accordance with claim **3** wherein said chime extends beyond a plane taken through said label tangent to said containers and the portions of said label along said weakened portion adjacent said cutout sections wrap around said chime.

5. A package in accordance with claim **1** wherein said weakened portion of said label comprises a series of diagonal cuts, each said cut being separated from its adjacent cut by a diagonally extending label web portion.

6. A package in accordance with claim **5** wherein said chime extends beyond a plane taken through said label tangent to said containers and the label webs along said weakened portion wrap around said chime.

7. A package in accordance with claim **1** wherein said label has a clearance cut along both adhesive coated edges.

8. A package in accordance with claim **1** wherein said first and second containers both have a chime which chimes contact one another along said weakened portion of said label, and further comprising a disc interposed between said cans and coaxially positioned therewith.

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