Nov. 12, 1968 E. L. ARNESON 3,410,398

CLIP AND WRAPAROUND PACKAGE COMBINATION

Filed July 17, 1967 3 Sheets-Sheet 1

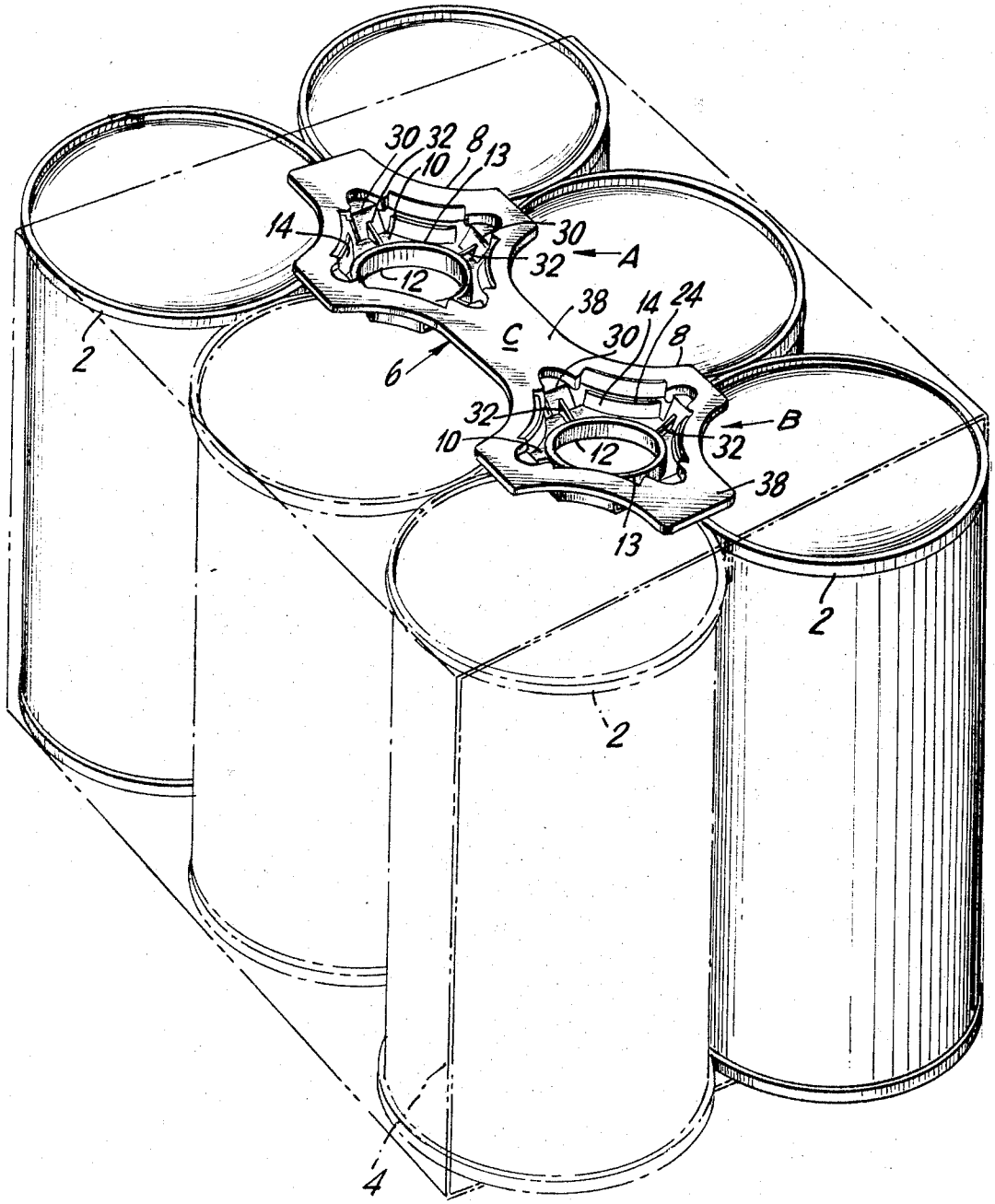


FIG. 1

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Filed July 17, 1967 3 Sheets-Sheet 2

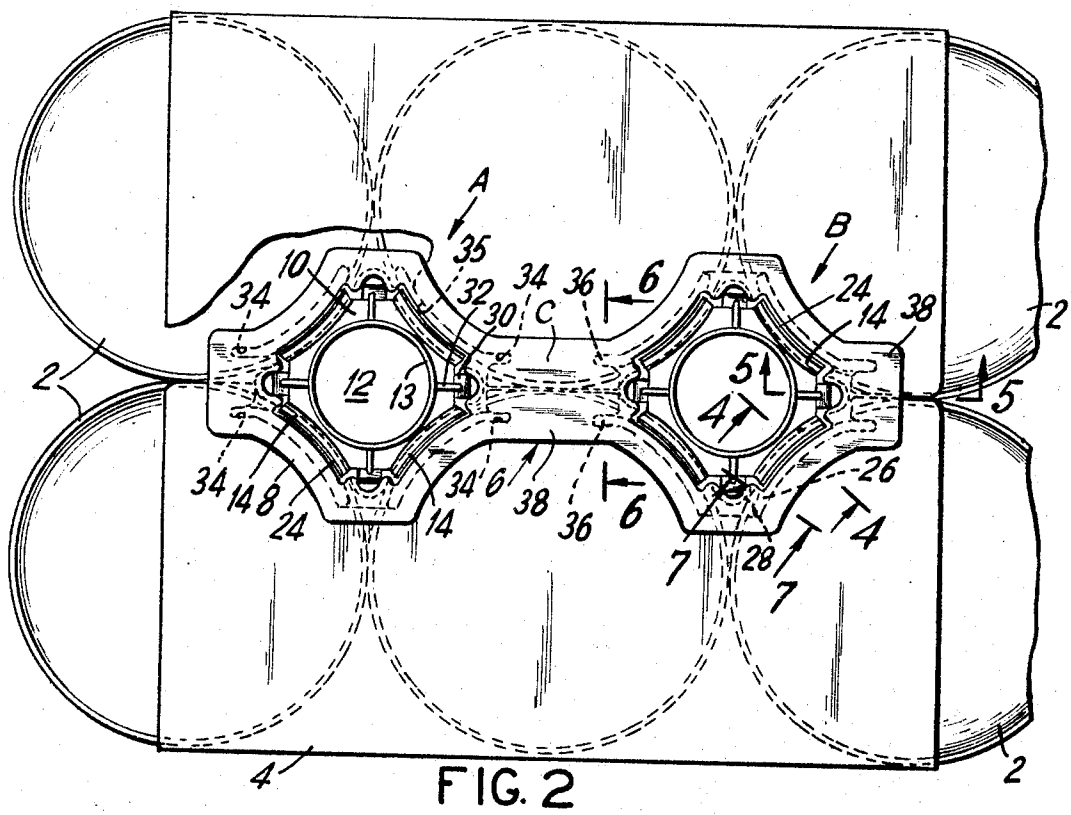


FIG. 2

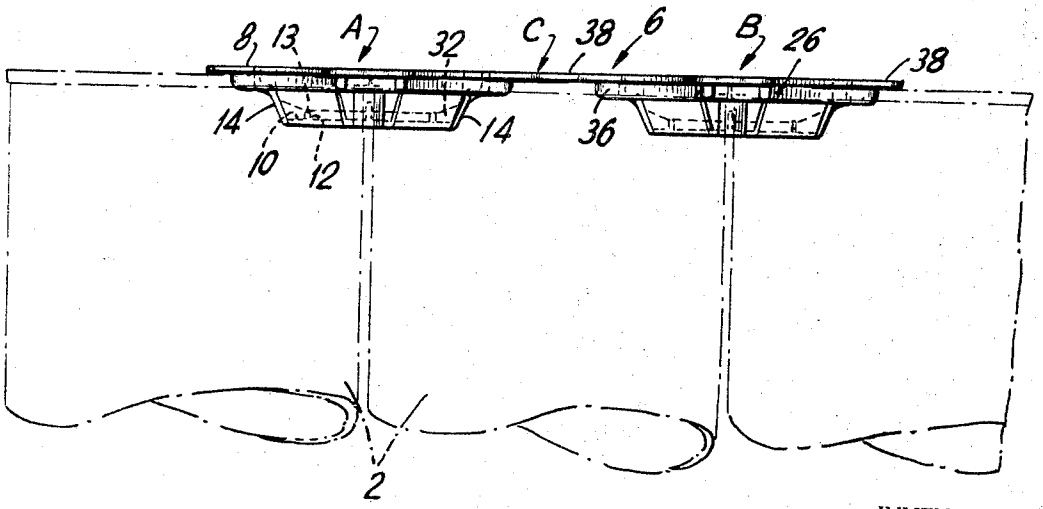


FIG. 3

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Filed July 17, 1967 3 Sheets-Sheet 3

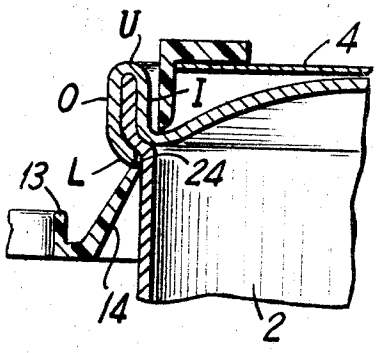


FIG. 4

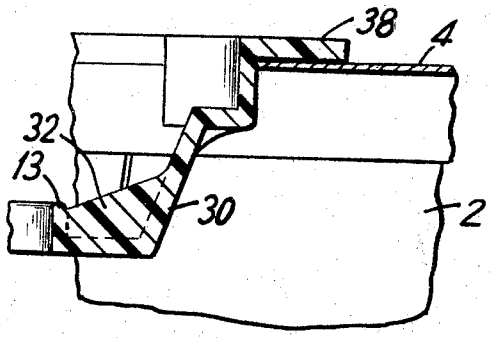


FIG. 5

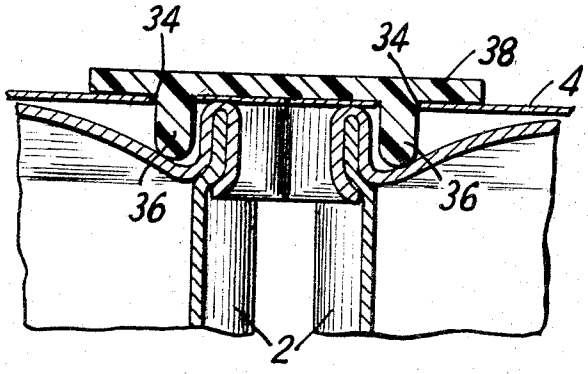


FIG. 6

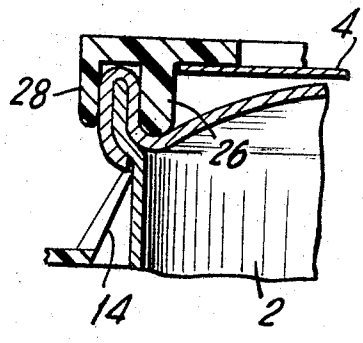


FIG. 7

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3,410,398

CLIP AND WRAPAROUND PACKAGE COMBINATION

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13 Claims. (Cl. 206—65)

ABSTRACT OF THE DISCLOSURE

A plastic clip which engages the beads of a plurality of containers to maintain the containers in assembled relationship, and which engages a wraparound made of paperboard, for example, which is partially wrapped around the assembled cans to hold the wraparound in assembled relationship with the cans to provide additional support for the assembled cans and to provide advertising or billboard space.

A plastic clip for assembling in side by side abutting relationship a plurality of beaded cans, the clip having a plurality of blades extending upwardly from a frame to engage the can side and the bottom surface of the bead and a plurality of downwardly depending flanges which engage the inner surface of the bead. The clip also includes depending flanges or abutments which conform to and fit within corresponding openings or apertures in the wraparound to hold the wraparound in assembled relationship with the array of containers.

This invention relates to a plastic clip and wraparound combination for holding a plurality of containers such as beer cans or soda cans in a side by side abutting relationship.

There are in the prior art numerous ways and means for holding a plurality of cans in such relationship. Most usually six (6) containers are assembled in such manner but a greater or lesser number of such containers can be assembled in the same manner.

There are on the marketplace a variety of different devices for holding the cans in the assembled relationship. Numerous types of cardboard or paperboard packages, for example, are provided for this purpose. These various types of packages are, in general, quite satisfactory but they require a large amount of relatively expensive materials to be used and require special equipment for assembling the packages. Moreover, since the paperboard must have sufficient strength to maintain the cans in their assembled relationship, difficulty is sometimes encountered in attempting to remove the container from the package.

The invention is particularly adapted for assembling that type of container or can having a bead or chine at least at one end of the container. The bead or chine which is formed during the manufacture of such containers includes an upper surface, a lower surface, an inside surface and an outside surface.

Over the years various types of plastic and metal clips which engage the bead or chine have been suggested for holding cans in their assembled relationship.

Typically, prior art clips have included some type of surface such as a hook or flange for engaging the lower surface of the chine and some type of surface such as a shoulder for engaging the inner surface of chine which surfaces on the clip cooperate to hold the cans as desired.

Some prior art clips are not satisfactory because they lack sufficient strength or gripping power to maintain the cans in assembled relationship when subjected to the rough treatment received during shipping or by consumers during ordinary use.

Other plastic and metal clips are found to be unsatisfactory because they are difficult to assemble or attach to the container or cans in a simple, expeditious fashion.

Furthermore, it has been found that to immobolize the container or cans when subjected to the rough treatment they must be supported at the top and bottom of the array of containers. Accordingly, some prior art devices require clips at both ends of the containers. The use of clips on the top and bottom presents assembling problems in addition to the cost of such clips.

Moreover, while some clips may be satisfactory for maintaining the cans in assembled relationship they present a rather stark unattractive package for the consumer. For example, unless great care is exercised, the longitudinal seams of the cans may on one or more of the cans be visible to the potential purchaser and may hide the brand name or trademark for the goods from the consumer.

It is therefore an object of this invention to provide a new and improved clip and wraparound combination for maintaining an array of containers in assembled relationship.

Another object of this invention is to provide a clip and paperboard wraparound combination for holding an array of containers having beads at least at one of their outer ends wherein the clip engages the beads of the cans and the paperboard wraparound to provide an attractive package for maintaining the cans in assembled relationship.

A further object of this invention is to provide a plastic clip and paperboard combination for maintaining a plurality of beaded cans in assembled relationship wherein the plastic clip engages the beaded cans and a paperboard wraparound whereby the top, sides and bottoms of the cans are supported.

Additional objects and advantages of the invention will be set forth in the description which follows and in part will be obvious from the description or may be learned from practice of the invention, the objects and advantages being realized and obtained by means of the steps or instrumentalities particularly pointed out in the appended claims.

Briefly described, the present invention includes a plastic clip adapted to engage the bead or chine of a can or container which typically contains a carbonated beverage of some kind. The clip also engages and holds in position a paperboard wraparound to support the container at all sides.

As embodied, the plastic clip includes a top or planar portion having a depending frame portion which is positioned adjacent the sides of the containers to be assembled. The frame has a plurality of blades extending upwardly therefrom to engage the bottom surface and the side of the can. The blades cooperate with flanges extending downwardly from the top or planar portion to engage the chine adjacent the side edges of the blade and adjacent the place where the two can sides come together.

As embodied, the invention further includes a sheet of material, preferably paperboard or cardboard, which is wrapped almost completely around the assembled cans and is held in such assembled relationship by the plastic clip. In accordance with the invention the wraparound passes around the bottoms and sides of the cans with the ends or edges of the wraparound in adjacent non-abutting relationship at the top of the cans and beneath the clip. The clip includes means for maintaining the wraparound in assembled relationship without the necessity for providing an independent means such as an adhesive to hold the paperboard in assembled relationship. The paperboard wraparound serves several functions. One function of the paperboard is to provide a space for advertising, slogan, trademarks, etc. and to eliminate almost completely the possibility that the unsightly longitudinal can seams will

face the purchaser. In addition, the wraparound supports the bottom and sides of the cans while in the assembled relationship so that clips need only be used on one end of the containers.

The clip as noted hereinbefore also maintains the paperboard wraparound in its assembled relationship with an array of containers.

It should be understood that although the expression, paperboard, is sometimes used in describing the wraparound that the invention is not limited to the use of paperboard as a wraparound. Accordingly, wraparounds may be made of paper, cardboard or other materials. An advantage, however, of the present plastic clip and wraparound combination is that it is not necessary from a strength viewpoint to utilize cardboard for this purpose and the lighter weight paperboard can be used.

The invention consists of the novel parts, steps, constructions and improvements shown and described.

The accompanying drawings which are incorporated in and constitute a part of this specification illustrate an embodiment of the invention and together with the description serve to explain the principles of the invention.

Of the drawings:

FIGURE 1 is a perspective view of the invention showing the clip and wraparound combination with the wraparound shown in phantom to emphasize the relationship of the clip and the container.

FIGURE 2 is a top plan view of the invention with a portion of the wraparound removed to show the assembled relationship of the clip to the cans.

FIGURE 3 is a side view of the clip as shown in FIGURE 2.

FIGURE 4 is a sectional view taken along lines **4**—**4** of FIGURE 2 and looking in the direction of the arrows.

FIGURE 5 is a sectional view taken along lines **5**—**5** of FIGURE 2 and looking in the direction of the arrows.

FIGURE 6 is a sectional view taken along lines **6**—**6** of FIGURE 2 and looking in a direction of the arrows.

FIGURE 7 is a sectional view taken along lines **7**—**7** and looking in the direction of the arrows.

It is to be understood that both the foregoing general description and the following detailed description are exemplary of, but not restrictive of, the invention.

Referring to FIGURE 1 there is shown six cans or containers **2** being held in side by side assembled relationship by the clip and wraparound combination. Portions of the cans **2** and the wraparound **4** are shown in phantom to permit observation of the clip in relationship to the cans.

As shown herein, the containers are six in number forming the conventional six pack and, accordingly, two clips A and B are illustrated, the clips being connected by a center piece C. If, of course, only four cans or even two were to be connected, then only one such clip member need be utilized.

Further, the invention is particularly adapted for assembling in package form cans of the type having a bead or chine at least at one end thereof. As will be appreciated, these beads may be constructed in different ways depending on the can manufacture involved and the invention is not limited to any particular form of can bead or chine. Nevertheless, such beads or chines will, as shown in FIGURE 4, include an upper surface U, a lower surface L and an inside surface I and an outside surface O.

Referring to FIGURES 1, 2 and 3, the clip **6** includes a top or planar portion **8** which extends generally over the junction of the cans. The top or planar surface **8** is connected to a frame or body **10** which is positioned beneath the top or planar surface and extends into the space between adjacent containers. The frame **10** has an aperture **12** in its center for receipt of the user's finger so that when six cans are assembled, as shown, the entire package can be carried by one hand with only two fingers. As shown, the aperture has a flange **13** (FIGURES 1 and 4) surrounding the aperture.

In accordance with this invention means are provided on the clip for firmly grasping or engaging the bead or chine on the container.

As embodied, the plurality of blades are positioned on the body or frame **10** and extend upwardly towards the top or planar portion of the clip and outwardly from the frame **10** as can best be seen in FIGURES 1, 3, 4 and 7.

As embodied, the blades **14** have a curvature, as shown best in FIGURE 1, conforming generally to the curvature of the side of the can.

The blades, as noted, extend outwardly so that as the clip is connected to the cans the blades will slide along the outer surface O of the chine and then snap into the position shown in FIGURE 4 wherein the blades are wedged between the lower surface L of the chine and the side of the can. To assist in this relationship each blade is provided with a flat horizontal surface **24** at the terminal end of the blade. Thus the blades are pointed at their ends and since the curvature of the blades conforms to the container there is line contact between the clip and the container.

The invention further includes means for engaging the container chines adjacent the outer sides of the blades.

It has been found that the maximum stress on a clip of the type which engages the chines of a plurality of containers is adjacent the junction of adjacent containers. In accordance with this invention maximum holding or gripping strength is provided in this area.

As embodied, extending downwardly from the top or planar surface **8** of the clip are a pair of flanges **26**, **28** adapted to form a vertical slot having a curvature corresponding to the curvature of the chine so that the major portion of the chine positioned with the slot is engaged by the flanges **26** and **28** as best shown in FIGURE 7.

As shown in FIGURE 7 the inner flange **26** engages the inside surface I of the chine and the top of the can. The outer flange **28** engages the outer surface O of the can.

As embodied, the flanges **26**, **28** engage those portions of the chine that are not engaged by the blades **14**. As can be seen in FIGURE 4 that portion of the chine which is engaged by the blade is not engaged by the downwardly extending flanges. Thus, the downwardly extending flanges have an offset or staggered relationship with the blades insofar as engagement with the can chine is concerned.

Referring to FIGURE 7 the flanges **26**, **28** engage the chine adjacent the point of engagement with the adjoining container and the flanges extend outwardly towards the end of the clip as far as desired.

The foregoing relationship provides a clip having strength where it is needed, i.e., where the cans are in abutting relationship, and results in the saving of plastic material which is not essential to proper functioning of the clip. Moreover, by providing a clip with a minimum surface engagement with the chine, the assembly of the clip to the can is facilitated.

In accordance with this invention means are provided for strengthening the clip and for connecting the top or planar portion to the frame. As shown herein, a plurality, i.e., four struts **30** are provided immediately adjacent the junction of abutting cans. As best shown in FIGURES 1 and 5, the struts **30** are inclined upwardly and outwardly from the frame. For each strut **30** a strengthening rib **32** is provided to prevent any tendency of the struts to be biased inwardly.

In accordance with this invention the plastic clip described hereinafter acts in conjunction with a partial wrap-around to provide a complete attractive package.

As embodied, the plastic clip cooperates with the wraparound so that the clip holds the wraparound in assembled relationship with the container. Thus, the wraparound by itself will not remain in assembled relationship with the container since there is no connection between the ends of the wraparound other than by the clip.

As shown in FIGURE 1 the paperboard extends sub-

stantially around the bottom and sides of the cans so that only the end sides of the cans are visible. In some instances the width of the wraparound can be greater or smaller as desired. As best shown in FIGURES 2 and 6, the wraparound has cutaway portions which conform to the shape of the bottom portion of the clip as shown by lines **35** in FIGURE 2. More particularly, the wraparound is provided with a plurality of notches or slots **34** adjacent the adjoining edges of the wraparound which conform to the flanges or studs **36** on the clip which extend downwardly from the planar surface of the clip.

The flanges or studs **36** extend into the apertures or notches **34** in the wraparound as shown in FIGURE 6 to hold the wraparound in edge by edge relationship. Thus, downwardly, outwardly or inwardly forces on the wraparound will be resisted by the flanges or studs extending into these apertures. The clip also includes a plurality of horizontally extending flanges **38** (FIGURES 5 and 6) which are located on the top of the wraparound to aid in holding it in the desired position.

It will be understood that the edges of the wraparound are located beneath and in engagement with the clip and do not overlap or even necessarily come into abutting contact. The studs or flanges on the clips which extend into the corresponding slots or opening in the paperboard thus constitute the sole means for maintaining the wraparound in assembled relationship.

As shown in the drawing, the wraparound is solid, in form, but it is to be understood that the wraparound could be provided with cutouts for the can bead and still be within the scope of this invention.

The clip described herein has generally been referred to as preferably being a plastic clip. It should be understood, however, that the clip is not necessarily made of plastic but could be made of other or different materials if so desired.

I claim:

1. A device for packaging a plurality of cans having beads at least on one end thereof in assembled side by side relationship, said beads having a top surface, a bottom surface, an inside surface and outside surface comprising:

(a) a clip having a top surface extending over the junctions of the side by side cans and partially over the top surface of the assembled cans,

(b) means on said clip for engaging portions of the bottom, inside and outside surfaces of said beads so that said cans are connected to said clip,

(c) a wraparound extending from the top of said assembled cans adjacent the point of abutment thereof down the sides of said cans, across the bottoms thereof and up the other side terminating adjacent the beginning of said wraparound,

(d) and means on said clip in cooperative relationship with said paperboard for maintaining said paperboard in assembled relationship with said cans.

2. A device as defined in claim **1** wherein said clip includes a plurality of depending studs and said wraparound includes a plurality of apertures in which said studs are positioned.

3. A device as defined in claim **2** wherein the apertures in the wraparound are located adjacent the adjacent edges of the wraparound when in its assembled position.

4. A device as defined in claim **3** wherein said apertures are in the form of slots substantially parallel to the edges of said wraparound and said studs are in the form of flanges which are parallel to said edges of the wraparound when said clip is in assembled relationship with said cans.

5. A device as defined in claim **4** wherein said slots in said wraparound are located at each end of said clip.

6. A device as defined in claim **5** having two connected clips and wherein each clip has at least two downwardly extending studs at each end thereof adapted to be received by a corresponding number of slots in said wraparound.

7. A device as defined in claim **1** having a frame connected to and positioned below said planar surface, said frame being positioned in the space between adjoining cans assembled together by said clip and having means thereon for engaging the junction of said bottom surface of the bead and the can side.

8. A device as defined in claim **7** where said frame includes a plurality of blades equal in number to the immediately adjacent assembled cans extending upwardly and outwardly from said frame member and adapted to engage the junction of the can side and bead bottom.

9. A device as defined in claim **8** wherein each of said blade members is arcuate in form to conform to the curvature of the immediately adjacent can side.

10. A device as defined in claim **8** wherein a plurality of flanges extends downwardly from said top surface to form a space therebetween for receipt of said bead.

11. A device as defined in claim **10** wherein said flanges engage the inside and outside surface of said bead.

12. A device as defined in claim **11** wherein said blades engage the intermediate portion of said bead and said flanges engage that portion of the bead adjacent the junction of adjacent cans.

13. A device as defined in claim **12** wherein said supporting struts are provided for the frame adjacent that portion of clip adjacent adjoining cans.

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