Dec. 20, 1960 R. G. HUGHES 2,965,410

PAPERBOARD CAN HOLDER

Filed March 4, 1957

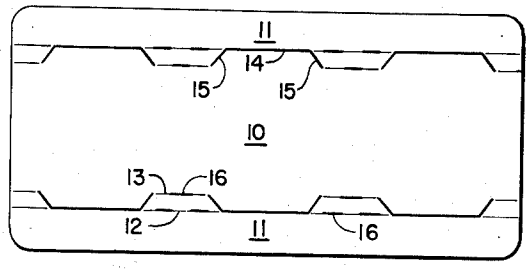


FIG. 1

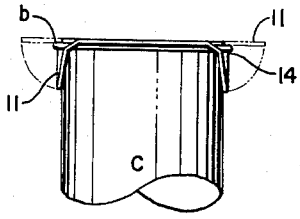


FIG. 2

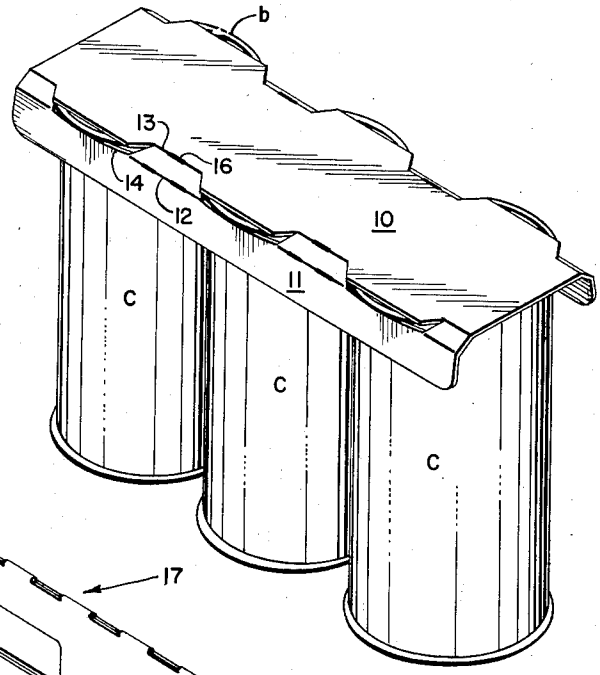


FIG. 3

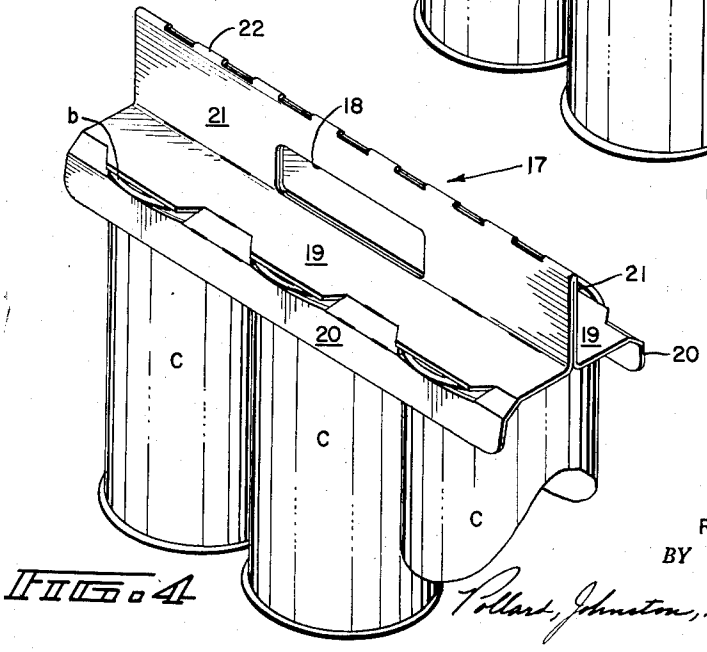


FIG. 4

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United States Patent Office 2,965,410 Patented Dec. 20, 1960

2,965,410

PAPERBOARD CAN HOLDER

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Filed Mar. 4, 1957, Ser. No. 643,638

3 Claims. (Cl. 294—87.2)

The invention relates to a paperboard holder for cans, such as those used for beer and ale, which are normally made of metal and sealed with "beaded" ends, and for other containers generally similar in configuration to such beaded end cans.

Summary

I have discovered an improved way of packaging cans in holders, or containers, of thin paper board which can be left flat prior to their application to the cans. According to my invention it is possible to tie a row of cans—say three cans of beer—tightly together by merely bending the side panels of a flat holder over the sides of the cans. When the cans are secured to the holder in this manner they are held so effectively that it is virtually impossible for the cans to be released without tearing the paperboard holder.

My invention consists of a paperboard holder for cans having beaded ends comprising a rectangular body panel and two rectangular side panels formed as extensions of the body panel and separated therefrom by interrupted score lines having cuts, connecting adjacent scored portions of the score lines, which receive the beaded ends of the cans. The side panels are folded, along the score lines, over the sides of the cans without the need of any preliminary blank setting up operation. This folding causes the locking portions formed by the cuts to snap under the beads of the cans. When an upward force is exerted on the main body panel the portions of the side walls adjacent the cuts are caused to be tensioned into a position surrounding adjacent portions of the can bodies, such tensioning increasing as the upward force is increased. This insures a secure locking of the can in the holder at all times.

Another advantage of my invention is that the blanks can be sent to the packaging plant in a flat condition and can be applied to the cans without any prior setting up or gluing operations.

Other objects and advantages will appear as the description proceeds.

Description

In the drawings wherein I have illustrated the best mode contemplated by me of carrying out my invention:

Fig. 1 is an inside face view of the preferred form of holder prior to its being applied to the cans.

Fig. 2 is a transverse view of the holder of Fig. 1 applied to a container having beaded edges.

Fig. 3 is a perspective view of the holder of Fig. 1 applied to three cans in a row.

Fig. 4 is a view similar to Fig. 3, but illustrating a modification in the construction.

Referring to Figs. 1–3, inclusive, I will now describe the construction of a holder embodying my invention in one of its preferred forms. Fig. 1 shows a preferred form of my holder prior to its application to cans C having beaded ends *b*. Each holder comprises a rectangular body panel **10** and two rectangular side panels **11** formed as extensions of the body panel. The body panel and

the side panels are separated by interrupted score lines **12** and **13** having two series of cuts near the edges of the holder. Each of these cuts has a portion **14** parallel to the edge of the holder along score lines **12** and portions **15** at an angle to the edge of the holder connecting the ends of cuts **14** to score lines **13**. The score lines may have cut portions **16** in order to insure more exact folding of the holder.

The holder shown in Fig. 1 is applied to a row of cans in the manner best illustrated in Fig. 2. The holder is positioned over a row of cans and side panels **11** are folded along score lines **12** and **13** over the sides of cans C so that the edges formed in the side panels by cuts **14** will be under beaded cans *b*. The portion of the side panels contacting the cans will bow outwardly so that said portions will assume the shape of the cans, thereby increasing the lateral extent of the bearing between the edges of the side panels formed by cuts **14** and the ledge at the base of beaded ends *b*.

A result of constructing the holders in the manner described is that when the side panels are folded over the sides of the can, they automatically lock the cans in place so that an upward force exerted on body panel **10** causes the portions of the side panels contacting the cans to be tensioned in a direction toward said cans. This tensioning increases as the weight being lifted increases, thereby insuring a secure locking of the cans in the holder. I have found that the gripping action of the locking flanges is so strong that ordinarily it is not possible to remove the cans without rupturing the holder. Even though the holders are open ended after they are applied to the cans, I have found further that the paperboard holders exert such a powerful grip on the beaded ends of the cans that with a three can pack, weighing three pounds or more, the entire pack can be supported in a vertical position by using the top can as a handle for lifting.

The holder shown in Figs. 1–3 is formed by a conventional cutting and scoring die. Due to the generally rectangular shape of the holder and the straight line cutting and scoring operations, the forming operation is extremely simple and results in an absolute economy of paperboard stock. Since the holder is applied to the cans exactly as it is formed from the paperboard stock, a plurality of holders may be shipped flat, thereby requiring a minimum amount of shipping space without any need by the packager for any expensive setting up machinery. This results in a great saving for both the manufacturer of the holders and the packager who uses the holders.

Although the use of only one holder applied to the top of the cans is shown in the drawings, the holder of Figs. 1–3 can also be readily applied to the bottom of a row of cans in the same manner as that described above.

The holder of Fig. 4 is essentially the same as that of Figs. 1–3 except that it is provided with a handle portion **17** having a cutout **18** for grasping the holder. The blank from which the holder of Fig. 4 is made comprises two segments **19** forming a body panel similar to body panel **10** of the holder of Figs. 1–3, two end panels **20** identical to end panels **11** of the holder of Figs. 1–3 and handle-forming panels **21** which connect said segments. The handle-forming panels are separated by interrupted score line **22** about which they are folded so that their bottom faces are in contact. They are then fastened together by any suitable means, such as glue. The holder of Fig. 4 is applied to cans C in the same manner as is the holder of Figs. 1–3 and it has the same holding characteristics as those set forth above for the holder of Figs. 1–3.

The terms and expressions which I have employed are used in a descriptive and not a limiting sense, and I have no intention of excluding such equivalents of the

invention described, or of portions thereof, as fall within the purview of the claims.

I claim:

1. A paperboard holder for cans and the like having beaded ends comprising a rectangular flat body panel and two rectangular side panels formed as extensions of the body panel and separated therefrom by interrupted score lines having cuts connecting adjacent scored portions of the score lines to receive the beaded ends of the cans, each of said side panels being entirely free of connection to said body panel on three sides, said side panels being folded along the score lines over the sides of the cans when said body panel is in a position overlying the ends of the cans, without the need of any preliminary blank setting up operation, thereby causing the locking portions formed by the cuts to snap under the beads of the cans, so that an upward force exerted on the body panel causes the portions of the side walls adjacent the cuts to be tensioned into a position surrounding adjacent portions of the can bodies, such tensioning increasing as the upward force is increased, thereby insuring a secure locking of the cans in the holder.

2. A paperboard holder for cans and the like having beaded ends consisting of a flat body panel and two side panels formed as extensions of the body panel and separated therefrom by interrupted score lines having cuts, which receive the beaded ends of the cans, connecting adjacent scored portions, each of said side panels being entirely free of connection to said body panel on three sides, said side panels being folded along the score lines over the sides of the can from a position where the body panel and the side panels are coplanar, thereby causing the locking portions formed by the cuts to snap under the beads of the can into locking position, so that an upward force exerted on the main body panel causes the portions of the side walls adjacent the cuts to be tensioned into a position surrounding adjacent portions of the can bodies, such tensioning increasing as the upward force is increased, thereby insuring a secure lock at all times.

3. A paperboard holder for cans and the like having beaded ends, comprising a rectangular body panel and two continuous rectangular side panels formed as extensions of the body panel and separated therefrom by a pair of spaced straight interrupted score lines, the outer score line of each pair having straight cuts aligned therewith connecting adjacent scored portions thereof to receive the beaded ends of the cans, each of said side panels being entirely free of connection to said body panel on three sides, said side panels being folded along the score lines over the sides of the cans when said body panel is in a position overlying the ends of the cans, without the need of any preliminary blank setting up operation, thereby causing the locking portions formed by the straight cuts to snap under the beads of the cans, so that an upward force exerted on the body panel causes the portions of the side walls adjacent the straight cuts to be tensioned into a position surrounding adjacent portions of the can bodies, such tensioning increasing as the upward force is increased, thereby insuring a secure locking of the cans in the holder.

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