

Dec. 22, 1959

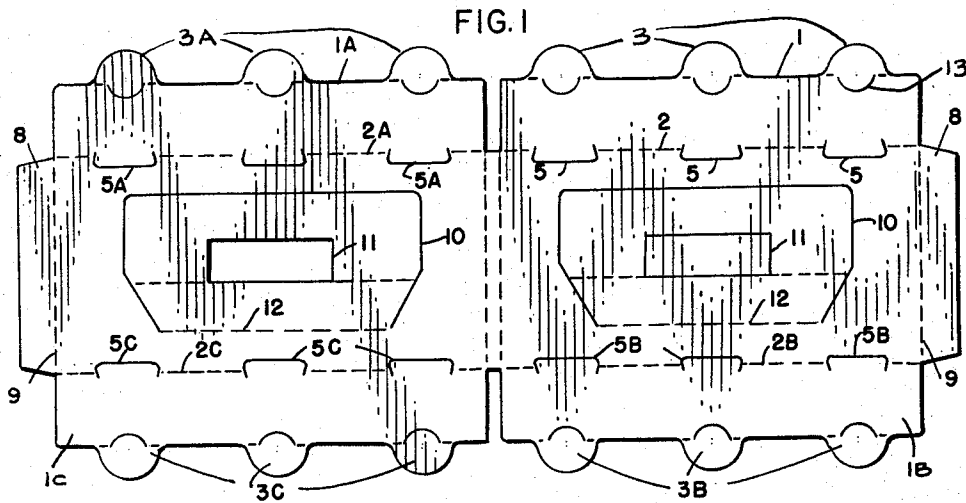
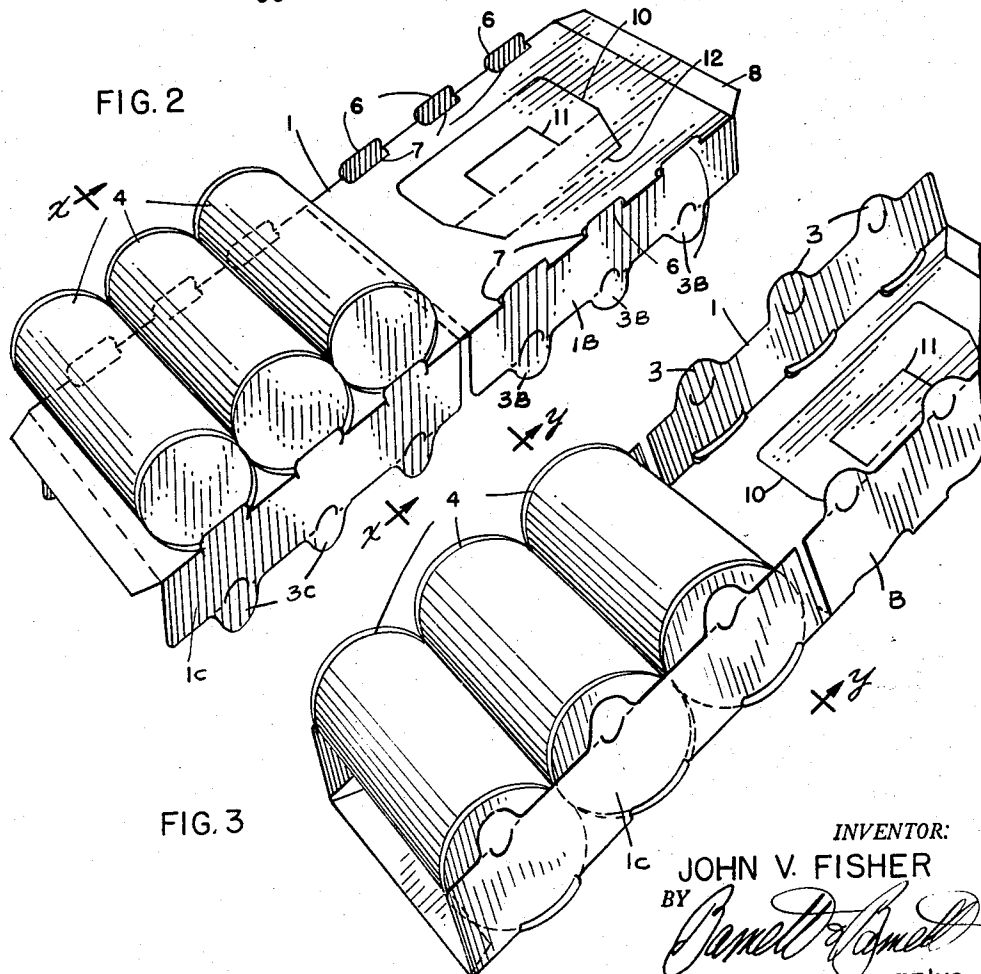
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2,917,877

MULTIPLE CONTAINER PACKAGE, CARRIER DEVICE AND PACKAGING METHOD

Original Filed March 19, 1953

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

FIG. 4

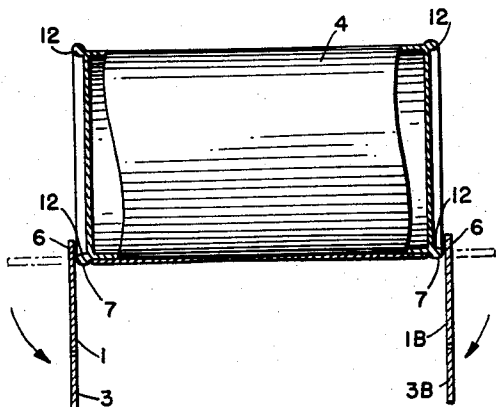


FIG. 5

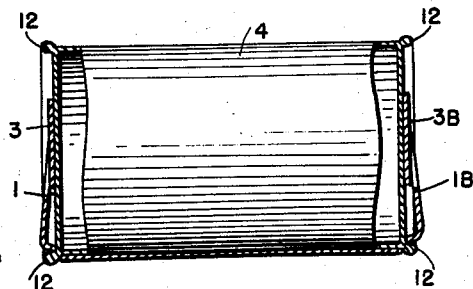


FIG. 6

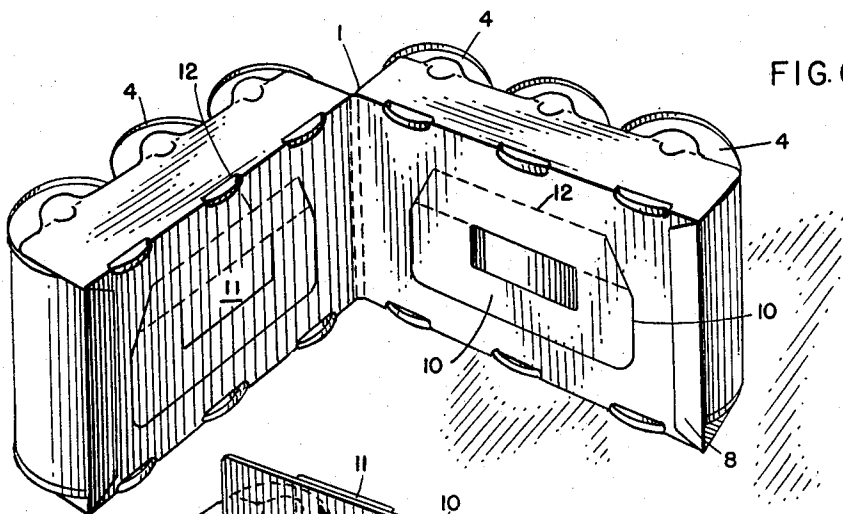
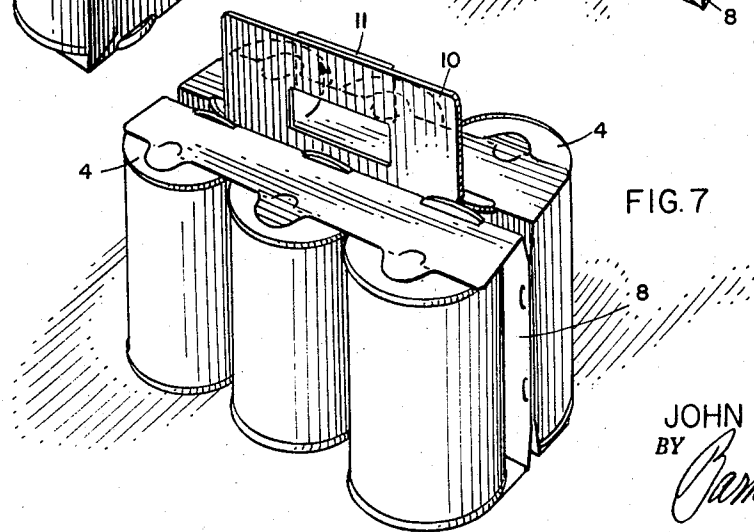


FIG. 7



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2,917,877

MULTIPLE CONTAINER PACKAGE, CARRIER DEVICE AND PACKAGING METHOD

John V. Fisher, Los Angeles, Calif., assignor of twenty percent to Larry Crosby, Los Angeles, and twenty percent to Kenneth M. Crawford, San Marino, Calif.; Constance M. Fisher, administratrix of said John V. Fisher, deceased

Continuation of application Serial No. 343,468, March 19, 1953. This application October 8, 1956, Serial No. 614,719

8 Claims. (Cl. 53—14)

This invention relates to the packaging of cans for the convenience of the consumer in carrying several cans of beverage, food, or the like from a retail store to the consumer's residence.

The present application is a continuation of my co-pending application Serial No. 343,468, filed March 19, 1953 on Can Package and Method, which application is now abandoned.

One of the objects of the invention is to provide a holder or carrier for a plurality of cans, which holder is easily and economically manufactured and assembled.

Another object is to provide an improved and economical method of packaging a plurality of cans with cardboard or similar sheet material whereby there is readily obtained a tight and unyielding engagement between the holder and the cans, thus enabling the filled holder to be transported without danger of any can becoming loose and falling out of the package.

Another object is to provide an attractive and effective holder which, with its contents, can be conveniently stored in a refrigerator or other storage space until the packaged product is to be consumed.

A further object is to provide a holder which gives maximum display to the label or other advertising material on each can packed therein.

A further object is to provide a holder of the type described which is particularly well adapted to mass packaging operations.

These and other objects will appear from the following description and with reference to the accompanying drawings wherein:

Fig. 1 is a plan view of the blank or stamping (cardboard, for example) from which the holder is made:

Fig. 2 is a perspective of the blank with certain portions folded to the initial packaging position:

Fig. 3 is a perspective view with the respective holding flaps folded against and sealed to the tops and bottoms of the cans:

Fig. 4 is a sectional view taken on line X—X of Fig. 2 showing the relative positions of one of the cans and a corresponding flap of the holder blank in the initial position shown in Fig. 2:

Fig. 5 is a sectional view taken on line Y—Y of Fig. 3 showing the relative positions of one of the cans and a corresponding flap of the holder blank in the sealed position shown in Fig. 3:

Fig. 6 is a perspective of the assembled cans and holder with all holding flaps sealed, the assembly being partially folded toward the final position; and

Fig. 7 is a perspective of the finished holder loaded with the six cans.

Like numerals refer to like parts throughout the several figures.

Referring first to Fig. 1, there is shown in that figure a flat piece of foldable sheet material, typically cardboard, scored and cut for the purposes presently to be described.

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The piece as illustrated in Fig. 1 is designed to provide a finished package (Fig. 7) carrying six cans although obviously the size and capacity of the holder may be changed to accommodate varying requirements without departing from the scope of the present invention. The cans are designated 4 in the drawing, each having the usual top and bottom beads projecting both axially from the can (perpendicularly to the end walls) and laterally beyond the cylindrical side wall of the can.

Reference character 1 designates one of four identical end panels or holding flaps, the inner edge of panel 1 being defined by a fold line 2. Equally spaced along the outer edge of flap 1 are three tabs 3 which, as will be best seen in Figs. 6 and 7, are ultimately secured to the tops of the cans 4.

Opposite each of the tabs 3 and along the fold line 2 of the holding flap 1 is a three sided substantially ear-shaped cut 5 extending away from the corresponding tab 3 and so positioned that the end of each cut extends slightly over the fold line 2.

The other three end panels or holding flaps 1A, 1B and 1C are formed in the same manner as holding flap 1 and are similarly provided with tabs 3A, 3B and 3C and cuts 5A, 5B and 5C aligned on the respective fold lines 2A, 2B and 2C. The distance between fold line 2 and fold line 2B (also between lines 2A and 2C) is the same as the over all height of the cans to be packaged.

As will best be seen in Fig. 2, when the end panels or holding flaps 1, 1A and 1C are folded in either direction along their respective fold lines 2, 2A, 2B and 2C, there will be formed, because of the cuts along the fold lines, a number of tabs or substantially ear-shaped projections 6 which, because of their function in the holder assembly, will be herein designated as wedging strips. The height of the wedging strips is approximately equal to, but preferably slightly greater than, the height of the bead on the can to be packaged; and the width of the strip is generally determined by the size and weight of the cans to be packed. A narrow wedging strip may be used for light cans, but generally speaking, the strip should be as wide as possible within the limits of proper functioning, as hereinafter described. As the wedging strips 6 are exposed by bending the holding flaps or panels 1, 1A, 1B and 1C, there will also be formed a number of slots 7 in the sheet material, the outer edges of which are defined by the fold lines of the holding flap. While these cuts and the corresponding strips may have rounded corners, as shown, they may be squared or arcuate if so desired. It will be understood that either such configuration or any other configuration by which the same result is accomplished will be included within the words "tabs," "ears," "wedging strips" or "substantially ear-shaped" as used herein to refer to tabs 6.

At either end of the die-cut (Fig. 1) is a projecting flap 8 which, when folded either way along its fold line 9 and sealed by any suitable means to the body of the blank, serves to reinforce that edge of the blank. As will be hereinafter explained, these reinforced edges on opposite ends of the initial blank are eventually brought together and stapled, as shown in Fig. 7.

The cut lines 10 and 11 and the fold lines 12 in the center of the upper and lower sections of the blanks define the handle of the assembled package as will hereinafter more fully appear.

Preferably each of the tabs 3, 3A, 3B and 3C is associated with a semi-circular cut 13 on the same axis as, but of slightly smaller radius than the tab, the cut being made on the holding flap immediately opposite the tab.

Having thus identified the various parts of the blank from which the holder is constructed, I will now describe the method of assembly. Such description will be facili-

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tated, however, by a preliminary comment on the wedging action which is one of the principal features of novelty in this holder.

As has been hereinabove explained, the panels or portions 1, 1A, 1B and 1C will, when folded either way along their respective fold lines 2, 2A, 2B and 2C, expose the tabs 6 and the slots 7. Inasmuch as these tabs 6 and slots 7 are formed by the same cut it is obvious that if holding flap 1, for example, is folded first in one direction and then in the other direction along its fold line 2, each of its tabs 6 will (in the absence of any obstruction) move through its corresponding slot 7 and project first on one side of the blank and then on the other. When two opposing holding flaps are folded in the same direction (downwardly for example) and a can is placed longitudinally across the top of the gap between the two flaps, the relative position of the can and the blank is as shown in Fig. 4. The bead 12 in the can bears against the base of the tab 6 so that the tab 6 projects over the bead 12 of the can parallel to the top of the can. Also, as will be noted, the bead 12 blocks the slot 7. If, while the can and blank are in this position, the holding flap 1 is folded in the opposite direction to bring the tab 3 to the top of the can 4 (Fig. 5) the tab 6 will, after the holding flap has been folded back for the first 90 degrees about against the inside surface of the bead 12 of the can 4. As the holding flap 1 is further moved to bring the tab 3 into engagement with the top of the can 4 and substantially parallel thereto, the tab 6 is firmly wedged against the radially inner side of bead 12, so that when the tab 3 is secured to the top of the can by any suitable means, such as by an adhesive, the tab 6 is in a tight, locked engagement with that inner side of the bead as shown in Fig. 5. Likewise the tab 6 of the holding flap 1B is in a locked wedging engagement with the bead at the opposite end of the can. As will be apparent, this engagement of each tab 6 with the radially inner side of the associated bead serves to retain the sheet material of the holder tightly against the side wall of the can directly adjacent and beneath (axially inwardly of) the bead, so that the bead is thus very effectively interlocked with the holder.

If the tabs 3 are glued to the top of the can, the cuts 13, as will be noted, permit a parallel engagement between the tab and the top of the can and, further, reduce any tension or stress away from the sealing surface.

In commercial operation the packaging procedure is substantially as follows:

The blank (Fig. 1) is placed on a suitable loading channel of the same width as the blank between the fold lines 2 and 2B, the respective holding flaps are folded down and the cans are rolled or otherwise moved into position as shown in Fig. 2. The holding flaps are thereupon folded upward through 180 degrees to the position shown in Fig. 3, thus locking the cans into position, and the tabs 3, 3A, 3B and 3C are sealed to the tops of the cans by any suitable means such, for example, as an adhesive wax, or by other means, such as binding down the tabs with an adhesive tape or a tie-string. This folding operation will, as heretofore described, force each of the tabs 6 against the inside of the bead 12 of the can 4 with which it is associated. Hence, as soon as the tabs 3 are sealed to the cans, the holder has a locked engagement with the cans which cannot be broken without either tearing the material or breaking the adhesive bond.

Next, as best illustrated in Fig. 6, the handle forming flaps defined by cuts 10 and 11, are folded upwardly and the straight line assembly of six cans is folded at the center (Fig. 6) to bring the cans back-to-back as shown in Fig. 7, in which position the reinforced ends 8 are secured together, for example, by stapling, to complete the package.

As hereinabove stated, the present invention is not limited to a package holding six cans. If the cans are

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sufficiently light, or if the material from which the holder is made is sufficiently strong, it is possible, without in any way departing from the scope of this invention, to produce a holder adapted to hold more cans. Likewise a smaller capacity holder may be made.

If rectangular or other straight-sided containers are employed the width of the tabs 6, may, if desired, be substantially as great as the width of the side of the container to which they are applied. With round containers, such as are commonly used for beer and dog food, the width of the tabs 6 is limited roughly to the width of an arc of the periphery of the can defined by a line drawn perpendicularly through the radius at a point in from the periphery a distance substantially equivalent to the height of the bead on the container. Within such limitations the tabs will, when the holder is formed, fall within the periphery of the container top and thus insure the desired wedging action.

The invention is also not limited to any particular method of securing the tabs 3 in the locking position as shown in Fig. 3. An adhesive is not essential. This could be accomplished, without departing from the scope of the present invention, in various other ways, as by elongating the tabs 3 so that the top and bottom tabs 3 can be stapled together, or by providing each tab 6 with a clip to snap onto the bead of the can.

Likewise the forming of the tabs 6 by the cut 5, though highly preferable from a matter of convenience and economy, is not absolutely essential. Such tabs could conceivably be formed separately and attached to the holder material by suitable means, or indeed, the holding flap 1 with the tabs 6 could be separately formed and attached along the fold line 2. In either such modification the slots 7 would not be essential. However, the unitary construction as shown is much more desirable than either of the suggested modifications.

The upstanding bead 12, as illustrated in the accompanying drawings, preferably projects slightly over the body of the can 4. This makes for more efficient cooperation with the wedging tabs 6.

It is also noted that it is not absolutely essential that the cans be locked to the holder at both top and bottom. Material and time may be saved by eliminating the lower portion of the holder entirely, but in such event, it is desirable to provide a strap, tie or other means for holding the bottom portions of the cans together.

Various other modifications within the scope of the invention will readily suggest themselves.

I claim:

1. The method of attaching a holder, formed of sheet material and containing a cut defining a locking tab, to a container having a peripheral bead at one end which projects both axially from said container toward said end and also laterally beyond an adjacent side wall of the can; said method comprising positioning adjacent said side wall of the container and axially inwardly of said bead, a first portion of the sheet material which is adjacent said cut and with the bead projecting laterally beyond said portion, bending a second portion of said sheet material carrying said tab to a position across the end of the container in essentially parallel relation thereto, and forcing said locking tab tightly against the radially inner side of said bead by virtue of said bending of the sheet material to thereby retain said first portion of the sheet material tightly against said side wall of the container.

2. The method of binding flexible holder material to a rigid container having an upstanding bead at one end thereof, which method comprises shaping a portion of said material to provide an end panel and a central panel, at substantially right angles to each other, providing the end panel with an ear which extends beyond the point of juncture of said panels for a distance corresponding approximately to the height of the bead on the container, placing the side of the container on the central panel with

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the top of the said upstanding bead bearing against the base portion of said ear, folding the end panel substantially 180° along the point of juncture of said two panels whereby the said ear is wedged against the inner edge of the upstanding bead, and then anchoring said end panel in that position.

3. The method of binding flexible material to a plurality of equal sized containers each having an upstanding bead at one end thereof, which method comprises folding a portion of said material to provide an end panel and a central panel at substantially right angles to each other, providing ears spaced along the fold line projecting upwardly from the end panel and above the central panel for a distance corresponding approximately to the height of the bead on each container and the distance between the center of each ear and the center of the next adjoining ear corresponding to the diameter of the top of the container, placing the containers longitudinally side by side on the central panel with the top of the upstanding bead of each container bearing against the base portion of one of said ears so that each ear is projecting over and parallel with the beaded end of one of the containers, folding the end panel through substantially 180° and along the aforesaid fold line whereby each ear is wedged against the inner edge of the upstanding bead of one of the containers, and then anchoring the end panel in that position.

4. The method according to claim 3 in which the plurality of containers thus anchored to the carton material are even in number and after the said anchoring operation the material is folded along a line running longitudinally of the containers at a point in the middle of the anchored containers, so that one-half of the containers is brought back-to-back with the other half to provide a package of anchored containers two deep and as long as the combined diameters of half of the containers.

5. The method according to claim 3 in which the containers are provided with an upstanding bead on both ends and the material is applied in like manner to both ends.

6. The method according to claim 4 in which a portion of the material is cut to provide handle flaps when the carton is assembled.

7. The method of anchoring a rigid container having an upstanding bead at one end thereof to material for packaging said container, which method comprises providing the material with a three sided, substantially ear-shaped cut, the width of which corresponds substantially

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to the height of the upstanding bead of the container, folding the material in one direction approximately ninety degrees longitudinally along said cut, thus forming, on one side of said fold, a slot defined by the said three sided cut and, on the other side of the fold, a similarly defined ear-shaped flap projecting adjacent said cut and at substantially a right angle thereto, placing the said container against the material on the slot side of the fold with the beaded edge of the can resting in said slot and the top of said bead abutting on said ear-shaped flap, then folding said material 180° in the opposite direction whereby the ear-shaped flap is wedged against the inner edge of the said upstanding bead and a portion of the material has come into contact with the container in the area surrounded by the upstanding bead, and then anchoring the flap in that position.

8. The method of attaching a holder, formed of sheet material and containing a cut defining a locking tab, to a container having a peripheral bead at one end which projects both axially from said container toward said end and also laterally beyond an adjacent side wall of the can; said method comprising positioning adjacent said side wall of the container and axially inwardly of said bead, a first portion of the sheet material which is adjacent said cut and with the bead projecting laterally beyond said portion, bending a second portion of said sheet material, which carries said tab, relative to said first portion and about a hinge line at which said two portions are joined together at one side of the container and in a manner such that during the bending action said second portion swings axially inwardly toward said end of the container to a position of extension across that end of the container in essentially parallel relation thereto, and forcing said locking tab tightly against the radially inner side of said bead at a location closely proximate to said hinge line by virtue of said bending of the sheet material to thereby retain said first portion of the sheet material tightly against said side wall of the container.

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