Dec. 31, 1957 N. ANDRE 2,818,171

CAN CARRIER

Filed June 14, 1956 2 Sheets-Sheet 1

Fig. 1

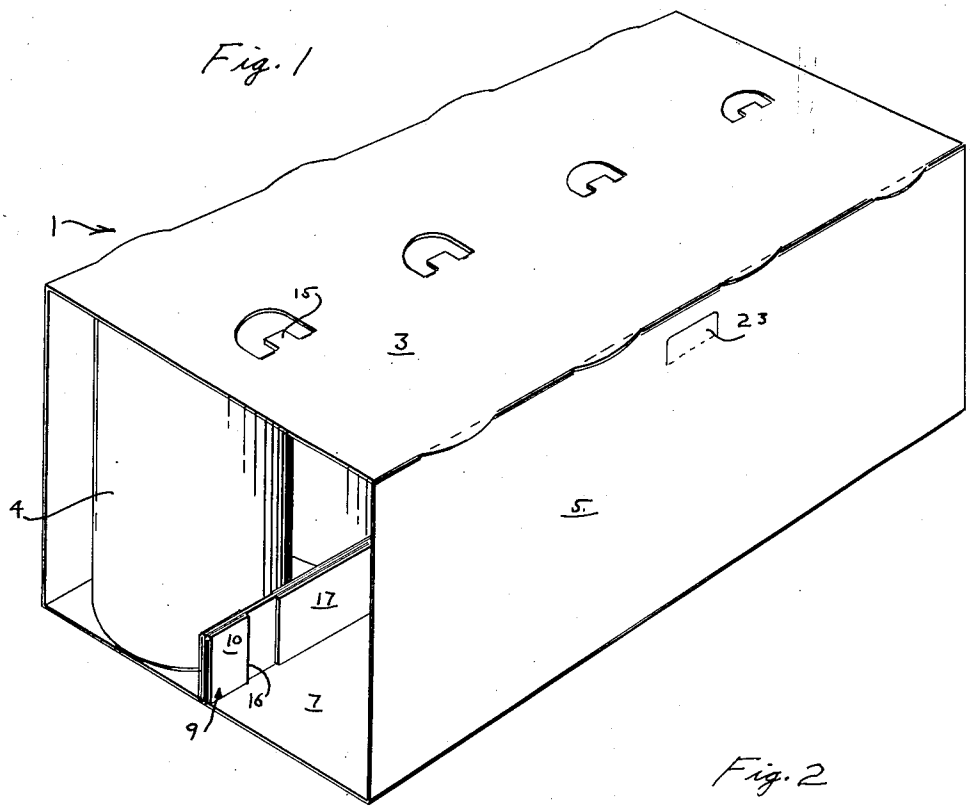
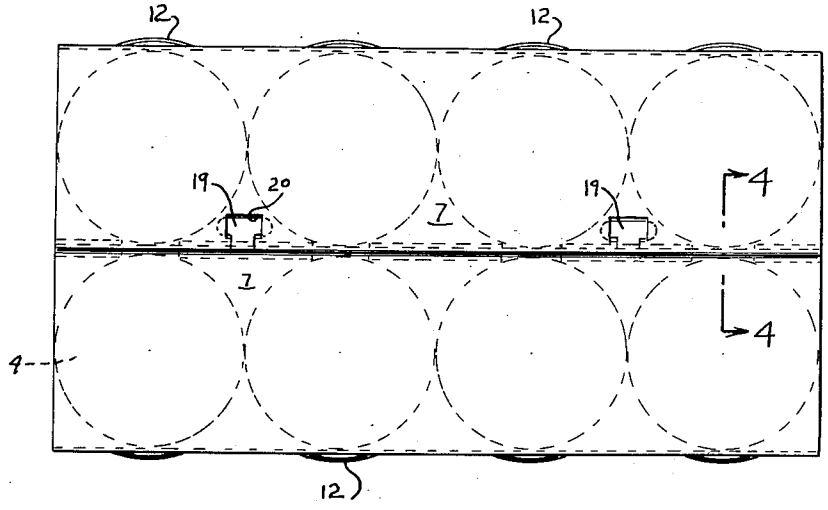


Fig. 2



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Fig. 3

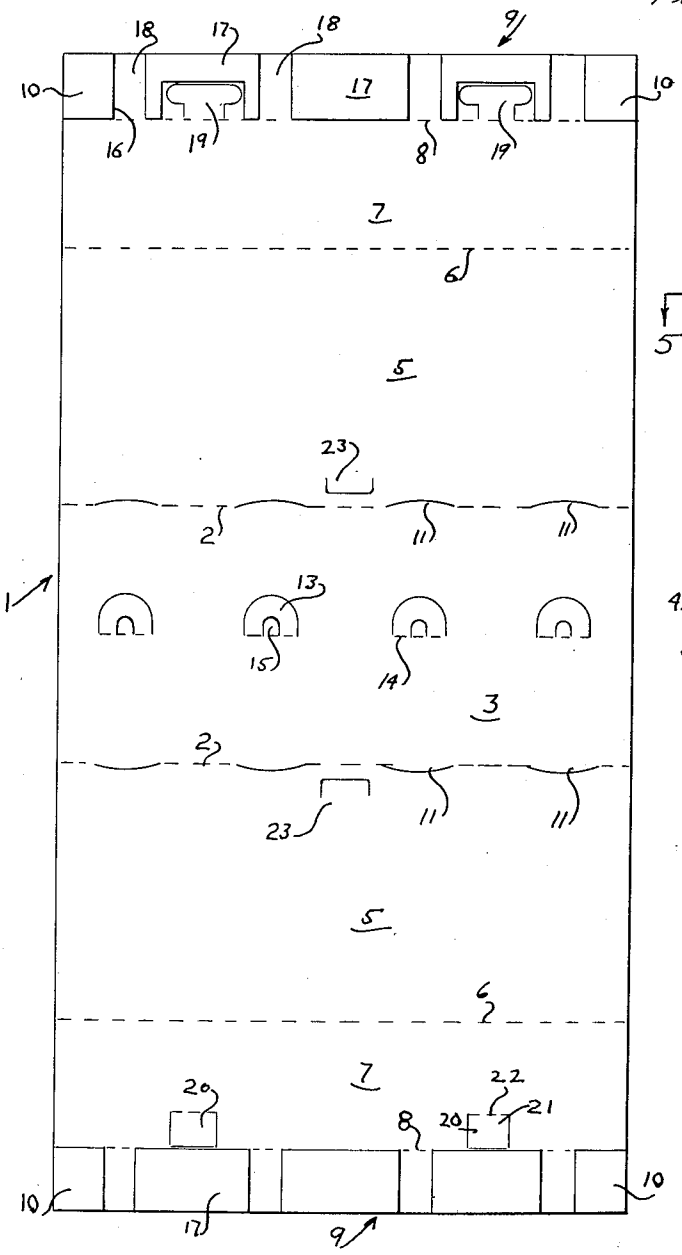
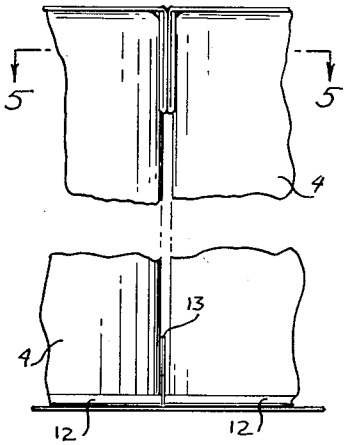


Fig. 4



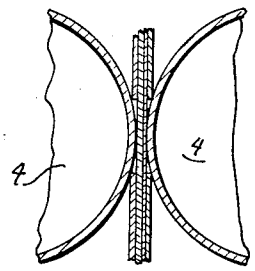


Fig. 5

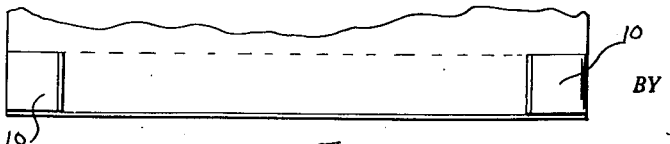


Fig. 6

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CAN CARRIER

Noble André, San Francisco, Calif.

Application June 14, 1956, Serial No. 591,361

1 Claim. (Cl. 206—65)

This invention relates to a can carrier and package similar to the one shown in my copending application Serial No. 557,885, filed January 9, 1956.

One of the objects of the present invention is the provision of an economically made can carrier or carton of the above type that is adapted to securely retain therein cylindrical cans of the kind having radially and axially outwardly projecting chimes at one of their ends only, their oposite ends being smooth and integral with the side walls. Such cans are normally drawn from a sheet of metal, and require closing one end only.

The carriers or cartons of the present type used for cans having chimes at both of their ends are usually open ended sleeves having side walls formed with slits into which the chimes project for holding the cans against movement out of the open ends of the sleeve. But where the cans have chimes at only one of their ends, they will not be held by said chimes securely enough to insure against dislodgment. It is an object of this invention to provide means in a can carrier of the open ended type that will hold the un-chimed ends of the cans in such a manner that the cans will be securely held in the carrier, and which means does not substantially modify the manner of packaging the cans by conventional methods. This latter is important inasmuch as the machines for automatically packaging cans in carriers of the open ended type has been developed and are in use in the industry.

Other objects and advantages will appear in the description and in the drawings.

In the drawings, Fig. 1 is a perspective view of a carrier having cans therein.

One of the end cans is removed in order to show construction of the carrier.

Fig. 2 is a top plan view of the package of Fig. 1, except that the carrier is filled.

Fig. 3 is a plan view of the blank from which the carrier is formed.

Fig. 4 is an enlarged fragmentary sectional view taken along line 4—4 of Fig. 2.

Fig. 5 is a sectional view taken along line 5—5 of Fig. 4.

Fig. 6 is a plan view of one end of a blank similar to that shown in Fig. 3 but of slightly different construction.

In detail, the blank from which the carrier or carton is formed (Fig. 3) comprises an oblong sheet of cardboard, generally designated 1, which sheet is formed with a plurality of spaced, parallel folding creases that extend transversely thereacross to enable the blank to be folded to form an open ended sleeve.

The central pair of folding creases, designated 2, define a central panel 3 on which the chimed ends of cans 4 (Fig. 4) are adapted to be positioned; as will be described later on in detail.

In using the word "creases" it is to be understood that the word is intended to include any suitable line of weakness to facilitate folding the blank.

At opposite sides of the central panel 3 and along the folding creases 2, are panels 5 that define the opposed side walls of the carrier when said panels 5 are bent to one side of panel 3 and perpendicular to the latter. Folding creases 6 define the edges of panels 5 that are remote from the folding creases 2.

Along the creases 6 are corresponding end panels or portions 7, and which end panels 7 are themselves formed with folding creases 8 equally spaced from the free end edges of the sheet 1 to define corresponding end marginal portions or end sections 9.

These end sections 9 define the terminating end marginal portions of the oblong sheet, and the end portions 7 adjoining them are the portions of the blank that are adapted to extend over the un-chimed ends of cans 4 when the cans are enclosed by the blank.

The said end sections 9 (Fig. 3) are of double thickness at the corners of the blank. This double thickness at each of the corners of the blank is preferably formed by providing extension tabs 10 integral with the ends of the end sections 9 and extending longitudinally of the blank, and then folding said tabs against one of the sides of the end sections and gluing them to said end sections.

The side of the blank shown in Fig. 1 is the inner side of the carrier that will be against the cans when said blank is folded about said cans, and the tabs 10 are glued against said inner side.

The blank 1, that is illustrated in Fig. 3 is adapted to enclose a pair of parallel rows of cans extending transversely of the length of the blank.

In a packaging operation, the cans are preferably positioned in a pair of parallel rows on the central panel 3, with their chimed ends against said panel. Curved slits 11 are formed in the blank at spaced points along the creases 2 to receive the radially outwardly projecting chimes 12 on one of the ends of the cans when the side walls 5 are folded to lie in close engagement with the opposite outwardly facing sides of the pair of rows of cans. In the illustration, there are four cans in each row. With larger sized cans, there would usually be only three cans in each row. However, the number of cans in each row may be more or less than four or three without changing the invention. If the carton or carrier is for eight cans in two rows of four cans in each row, then four slits 11 will be positioned along creases 2 at points where the chimes of the cans would otherwise engage the side walls. Instead the chimes project through the slits. This structure in itself is not new and has previously been used for the same purpose.

Preferably the central panel 3 is stamped to provide tabs 13 that project to one side of a medial line on said panel that is parallel with creases 2, and folding creases 14 on said line define one side of each tab 13 so that the tabs may be folded perpendicular to panel 3 for extending between the chimed ends of the cans that are on said central panel.

Each tab 13 is centrally cut out to provide a central and smaller tab 15 that normally remains planar with the panel 3 when tabs 13 are bent to extend perpendicularly to panel 3, thus leaving an opening in each tab 13 that corresponds in outline to the outline of each tab 15. This opening in each tab 13 is adapted to receive the chimes of the cans that are along opposite sides of the upstanding tabs 13. Thus the chimes 12 at the chimed ends of the cans 4 are held at opposite sides of each can against movement of the cans longitudinally of the rows thereof when the side walls 5 extend over the oppositely outwardly facing sides of the pair of rows.

The end portions 7 are adapted to be bent over the upper un-chimed ends of the cans in the two rows, one portion 7 extending over one row and the other portion extending over the other row, and the end sections 9 are

adapted to extend between the pair of rows at the un-chimed ends of the cans.

Thus the carton or carrier becomes a rectangular open ended sleeve with the two rows of cans having the end cans thereof exposed at the ends of the sleeve, and a web extending between the rows at the un-chimed ends of the cans.

As already described, the tabs or extensions **10** on end sections **9** being glued to said end sections at the sides next to the respective rows of cans, will provide an extra thickness at each end of each section **9**. The edges **16** of the extensions **10** will engage the sides of the end cans in the rows that are next to and in engagement with the sections **9**, thereby preventing the un-chimed ends of said end cans from shifting in direction toward the adjacent open ends of the sleeve or carrier that encloses the rows of cans.

If desired, other spaced extensions **17** between extensions **10** may be formed on the blank and glued against the sections **9** to provide shallow recesses **18** between each adjacent pair of tabs for receiving the sides of the cans therein.

Fig. 6 shows only the end extensions **10** since in normal shipments, as long as the end cans of the rows are held, the cans of the rows between said end cans cannot shift to any objectionable degree. The provision of additional extensions **17** as seen in Fig. 3 relieves the end extensions **10** of taking the full force of the un-chimed ends of the cans should they tend to shift, since each can is held at its un-chimed end. Fig. 5 clearly shows how the cylindrical sides of the cans are held.

The end section **9** along one of the creases **8** is stamped out to form a pair of locking tabs **19**. Each of these tabs is generally of T shape with the leg of the T relatively short and connected to the blank at the end of each leg, which end terminates along the crease **8** adjacent thereto. The crease **8** preferably does not extend across the end of each leg of the T, hence, when the section **2** is bent to a position between the rows of cans, the locking tabs **19** will remain coplanar with the panels **7**.

Along the crease **8** that is at the other end of blank **1** from the end carrying tabs **19**, the end panels **7** are stamped out to form rectangular openings **20**. If desired, the rectangular tabs **21** in each opening **20** may remain connected with the end panel **7** along their edges **22** that are remote from the adjacent crease **8**, since they in no way interfere with the locking action.

In folding the blank about the rows of cans, the end section **9** that is along openings **20** is first positioned between the un-chimed ends of the cans, and then the other section **9** is positioned between said un-chimed ends in abutting face to face relation to the first mentioned end section **9**. When this operation is completed, the T-shaped tabs **19** will be over the openings **20**, and as the width of the leg of each T-shaped tab is approximately equal to about the width of each opening **20**, the ends of the head of the T will lap the panel having

openings **20** at two opposite sides of each of said openings.

The next operation is to force the heads of the T shaped tabs through the openings **20**, and as the cardboard is resilient, said heads will bow in passing through the openings and will then resume their normal shape below said openings preventing withdrawal of said heads and locking the panels **7** in coplanar position over the unchimed ends of the cans.

The carrier may then be inverted so that sections **9** are lowermost (Fig. 1) and the panels **7** will readily carry the weight of the cans without loosening.

One or more openings **23**, that are similar to openings **20**, may be formed in the opposite side walls **5**, if desired, to receive the ends of any suitable handle for carrying the package, although such handle is not essential to the package, and no claim is made herein to a handle.

In Fig. 3 it is seen that the extensions **17** positioned at the points where tabs **19** occur, may be cut away so that the tabs will be of single thickness and will readily yield to pass through openings **20**.

I claim:

A package comprising; a pair of parallel rows of upright cylindrical cans, an oblong sheet of cardboard having a central portion extending over one of the ends of said cans and opposed side walls extending over the oppositely outwardly facing sides of said pair of rows of cans and end portions respectively extending over the other ends of the cans of each row and end sections integral with said end portions extending between the rows of cans at said other ends thereof, said central portion, side walls, end portions, and end sections being in close engagement with said cans providing an open ended sleeve with the end cans of said rows at the open ends of said sleeve, and means on said end sections at said open ends disposed wholly within the confines of the said sleeve in engagement with the end cans of said rows obstructing movement of said end cans out of said open ends, said means being one of the sides of oppositely outwardly opening shallow recesses on the sides of said end sections facing each row with said one of the sides of said recesses being adjacent to said open ends and in engagement with said end cans, said cans having radially and axially outwardly projecting chimes at said one of the ends thereof only and slits formed in said sheet at substantially the junctures between said central portion and said side walls into which said chimes extend, one of the sides of said cans at the said other ends thereof being in engagement with the bottoms of said recesses.

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