

March 12, 1963

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3,080,966

CAN PACKAGE

Filed Oct. 13, 1960

Fig. 1

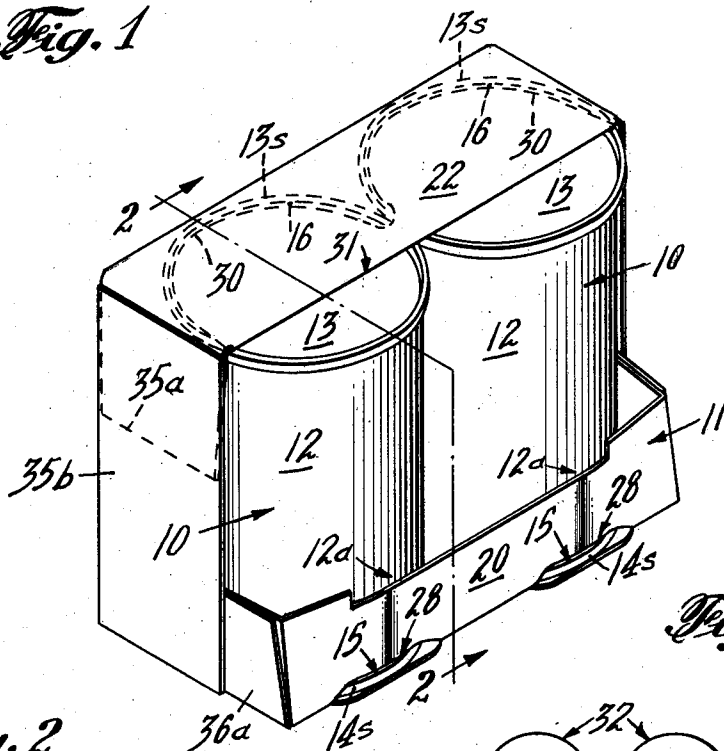


Fig. 2

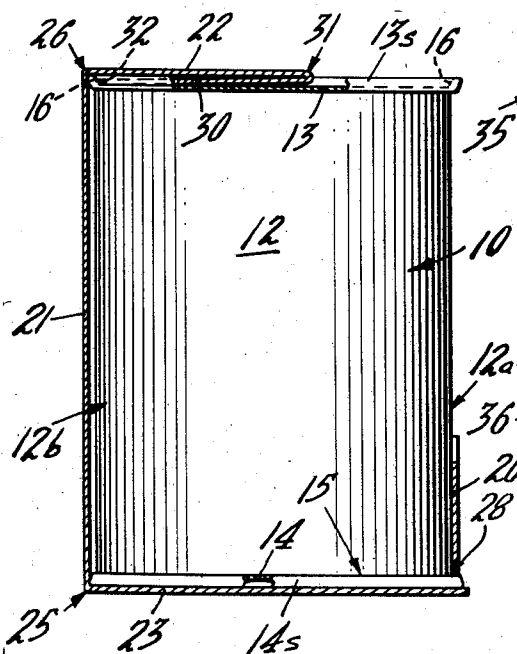
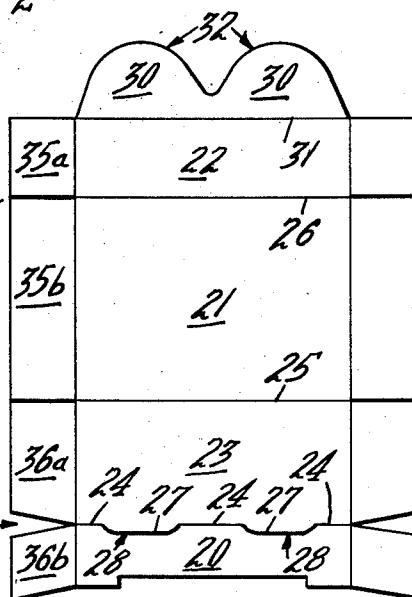


Fig. 3



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1

3,080,966

CAN PACKAGE

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Filed Oct. 13, 1960, Ser. No. 62,472

7 Claims. (Cl. 206—65)

This invention relates to a package comprising a plurality of individual and independent cans arranged in a row and a carton cooperatively engaged with those cans to hold the cans and the carton together as a unitary package with the carton only partially covering the cans to allow display of the cans.

One of the objects of the invention is to provide a carton which may be folded about a row of cans and interlock with the individual cans to hold the carton and the cans together.

A further object of the invention is to provide a carton which is incapable of supporting itself and which is capable of being cooperatively engaged with a plurality of independent cans to form a package.

A still further object of the invention is to provide a carton which has an edge engaging the most remote portions of the seams on opposite ends of a plurality of cans arranged in a row to hold the carton and cans together while exposing a large area of the surface of the cans.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawings:

FIGURE 1 is a perspective view of the package incorporating the features of the present invention;

FIG. 2 is a view partly in cross section taken along the line 2—2 of FIG. 1; and

FIG. 3 is a plan view in reduced size of a blank used to form the carton of FIG. 1.

In FIG. 1 there is illustrated a package comprising a plurality of individual and independent cans 10 arranged in a row and a carton 11. The cans and the carton are cooperatively engaged and locked together by folding of the carton around the cans in the manner as will hereinafter be described.

The cans illustrated and used to make the package described herein are ordinary cans commonly used in the industry. Each can has a tubular body 12 including a body front portion 12a and a body back portion 12b, a top can end 13 and a bottom can end 14. The top can end 13 is secured to the top end of the tubular body 12 by a top seam 13s and the bottom can end 14 is secured to the bottom end of the tubular body 12 by a bottom seam 14s. These seams 13s and 14s are disposed peripherally and endwise outwardly beyond the tubular body 12 so as to provide a shoulder 15 on the front wall portion 12a at the bottom end and at the seam 14s and to provide a shoulder 16 on the top can end 13 at the back wall portion 12b. The use of these shoulders will become more apparent later in this description.

The carton 11 is folded about the cans and interlocks therewith to form the package and has spaced opposing front and back panels 20 and 21 disposed on opposite sides of the cans 10 in a row and next adjacent the body of each can in the row. The carton also has opposing top and bottom panels 22 and 23 disposed next adjacent the top and bottom can ends 13 and 14 of the cans in the row.

The carton may be constructed from a single unitary flat sheet of material commonly referred to as a blank

2

and having a shape illustrated in FIG. 3. The front panel 20 is connected to the bottom panel 23 along a fold line 24. The bottom and back panels 23 and 21 are interjoined along a hinge fold line 25 while the back and top panels 21 and 22 are interjoined along a fold line 26.

The carton 11 folds about the cans so that front panel 20 overlies a portion of each can body front portion 12a and extends only part way from the bottom can end 14 to the top can end 13 so as to leave a major portion of each of the cans uncovered and exposed. The front panel 20 has slit means including an independent slit 27 for each can respectively in the row of cans. Each slit 27 is at the fold line 24 and defines an edge 28 abutable against its respective shoulder 15 so that the seams 14s are between the edges 28 and the bottom panel 23.

As further illustrated the carton contains tab means 30 joined to the top panel 22 at a distance from the back panel 21. In this instance and because the entire carton is folded from a single sheet of material the tab means 30 interjoins the top panel 22 along a front edge 31. The tab means 30 are folded back under the top panel 22 and lie between the top panel 22 and the top ends 13 of the cans. As is illustrated both the top panel 22 and the tab means 30 have a width less than the width of the top can end so as to expose at least a portion of the top can end.

The tab means 30 includes an individual tab portion defining an individual tab edge 32 for each individual can in the row. There are as many tab edges 32 as there are slit edges 28 and the tab edges 32 are spaced apart so that one tab edge and the slit edges 28 engage each can in the row with the tab edges 32 abutting the respective shoulders 16.

In the assembled package the carton is held in its position folded onto the cans by the abutting of the edges 28 and 32 against the shoulders 15 and 16 formed by the beads 14 and 13, the edge 28 being at the bottom and in the front of the can while the edge 32 is at the top and at the back of the can as viewed in FIGURES 1 and 2. In order to maintain the carton folded about the can it is necessary to prevent movement of the front and top panels 20 and 22 easily from the respective front portions 12a and top can ends 13 of the cans 10 in the row. This is accomplished by providing the carton with a pair of top end panels 35, one on each end of the row of cans and a pair of bottom end panels 36, one on each end of the row of cans. The bottom end panels 36 hold the front panel 20 at a fixed angle relative to the bottom panel 23. The top end panels 35 hold the top panel 22 at a fixed angle to the back panel 21. The top and bottom end panels 35 and 36 are disconnected from each other, thereby allowing hinged movement between the back panel 21 and the bottom panel 23 along the hinge line 25. Each carton top end panel 35 is constructed from a tab 35a on the end of top panel 22 and a tab 35b on the end of back panel 21, the tabs 35a and 35b overlapping each other and being glued together. Similarly each of the bottom end panels 36 are constructed from a tab 36a on the end of bottom panel 23 and a tab 36b on the end of front panel 20 with the tabs 36a and 36b overlapping each other and being glued together. It is noted that the front panel 20 is preferably maintained at an acute angle slightly less than transverse to the bottom panel 23 so as to insure the front panel 20 engaging the front body portions 12a and all of the edges 28 engaging all of the shoulders 15.

In assembling the package illustrated in FIG. 1 from the blank of FIG. 3 the tabs 36a and 36b are glued together to form the bottom end panels 36 and the tabs 35a and 35b are glued together to form the top end panels 35. Following this the cans 10 are placed on the bottom 23 in a row and with their bottom seams 14s extending through the respective slits 27. Next the tab por-

tion 30 is folded back under the top panel 22 and the back panel 21 is hingedly moved about the hinge 25 and relative to the bottom 23 to move the top panel into position over the top can ends 13 and to move the back panel 21 adjacent the back portions of the bodies of the cans. This movement is continued until each edge 32 snaps into abutment with its respective edge 16. Because of the normal resiliency in the material it has a tendency to unfold at the front edge 23 to move the edge 32 easily from the top panel 22 and towards the can end 13 and into engagement with the respective shoulder 16.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description and it will be apparent that various changes may be made in the form, construction, and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A package comprising a plurality of cans disposed in a row and cooperatively engaged and locked with a carton, said cans having tubular bodies, a top end secured to said body by a top seam, and a bottom end secured to said body by a bottom seam, said seams extending peripherally outwardly of said bodies and longitudinally outwardly of said ends, said carton having first and second portions, said first portion comprising a bottom panel, a front panel integral with said bottom panel and overlying a portion of said can bodies, means for maintaining said bottom panel at a pre-determined angle with said front panel, and slit means in said front panel defining first edge means therein, said first edge means abutting against said bottom seams adjacent said bodies and maintaining said bottom panel in contiguous relation and next adjacent to said bottom ends, said second portion comprising a back panel, a top panel integral with said back panel, means for maintaining said top panel at a pre-determined angle with said back panel, said means for maintaining said bottom and top panels at predetermined angles to said front and back panels respectively comprising separate side panels joining said bottom and said top panels to said front and said back panels respectively, and tab means joined to said top panel at a distance from said back panel and disposed between said top panel and the top ends of said cans, said tab means having second edge means abutting against said top seams adjacent said top ends and maintaining said back panel in contiguous relation and next adjacent to said can bodies, said back and bottom panels being interconnected solely along a hinge line whereby said first and second portions are freely hingeable with respect to each other and each of said portions is incapable of solely supporting the other in a fixed position relative thereto, said portions being supported and maintained in a substantially fixed position relative to one another solely by said cans.

2. The structure as defined in claim 1 additionally including said top panel having a width less than the width of said top can end and said tab means and top panel being a single piece of material interjoined along the front edge thereof with the tab means folded back in under the top panel and between the top panel and top can ends.

3. The structure as defined in claim 1 additionally including said front panel extending only a part of the distance from the bottom can ends towards the top can ends and thereby being spaced from the top can ends and exposing a large surface area of the can bodies.

4. The structure as defined in claim 1 additionally including said pre-determined angle between said front panel and said bottom panel being an acute angle adjacent the

end portions of said front panel, the portions of said front panel adjacent said can bodies being forced outwardly thereby and being disposed at substantially right angles to said bottom panel.

5. The structure as defined in claim 1 additionally including said slit means consisting of a separate slit defining a separate first edge for each can in the row of cans and said tab means having a separate tab portion terminating in a separate second edge for each can in the row.

6. The package as defined in claim 1 wherein said first and second portions of said carton are formed from a single sheet of material.

7. A package comprising a plurality of individual and independent cans arranged in a row and a carton incapable of holding itself in an erected condition, said cans and said carton being cooperatively interengaged and locked together to hold the carton in an erected condition, each can having a tubular body and top and bottom can ends, a top seam securing the top can end to the top end of the tubular body, a bottom seam securing the bottom can end to the bottom end of the tubular body, each said seam being disposed peripherally and endwise outwardly beyond the tubular body, said carton having spaced opposing front and back panels disposed on opposite sides of the cans in the row and next adjacent the body of each can and spaced opposing top and bottom panels disposed next adjacent the top and bottom can ends respectively of the cans in the row, said back and bottom panels being interjoined solely along a hinge line incapable of holding the panels in an erected position relative to each other, said front panel overlying a portion of each said body and having slit means therein defining first edge means abutting against the bottom seam adjacent the body of each can and thereby holding the bottom panel against the bottom ends of the cans in the row, said front panel extending only a part of the distance from the bottom can ends towards the top can ends and thereby being spaced from the top can ends and exposing a large surface area of the can bodies, said slit means consisting of a separate slit defining a separate first edge for each can in the row of cans, tab means joined to said top panel at a distance from the back panel, said top panel having a width less than the width of said top can end and said tab means and top panel being a single piece of material interjoined along the front edge thereof with the tab means folded back in under the top panel between the top panel and the top ends of the cans in the row and terminating in second edge means abutting against the top adjacent said top ends, said tab means having a separate tab portion terminating in a separate second edge for each can in the row, said tab means cooperating with said top and back panels in holding the top seams between said second edge means and said back panel thereby holding the back panel alongside the bodies of the cans, said carton having spaced opposing bottom end panels extending transversely to and interconnecting ends respectively of the bottom and front panels and holding the front panels at a fixed angle relative to the bottom panel, said carton having spaced opposing top end panels extending transversely to and interconnecting ends respectively of the back and top panels and holding the top panel at a fixed angle relative to the back panel, said bottom and top end panels being independent from and freely movable relative to each other.

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