

Nov. 8, 1955

R. GUYER
CARTON HANDLE

2,723,027

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2 Sheets-Sheet 1

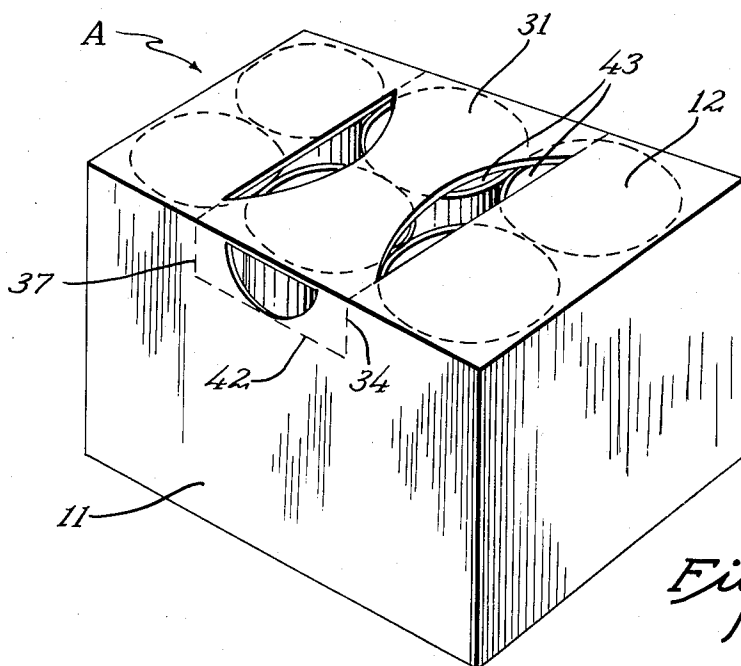


Fig. 1

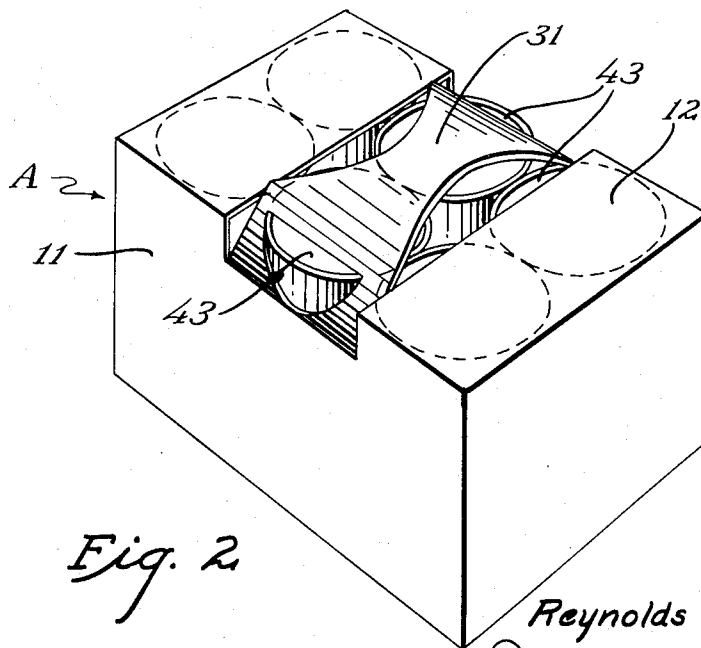


Fig. 2

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2 Sheets-Sheet 2

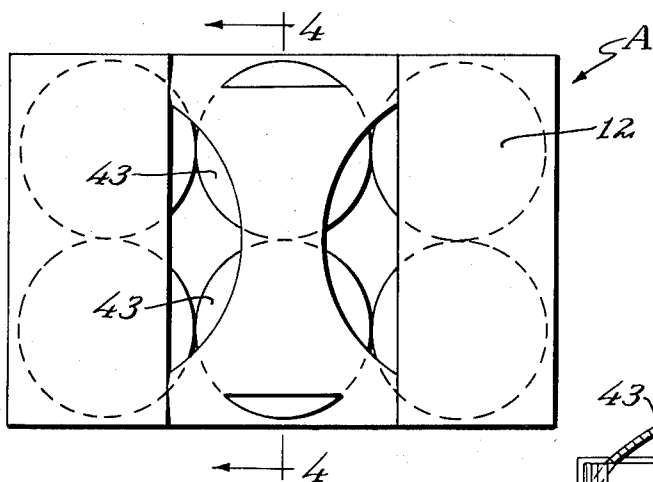


Fig. 3

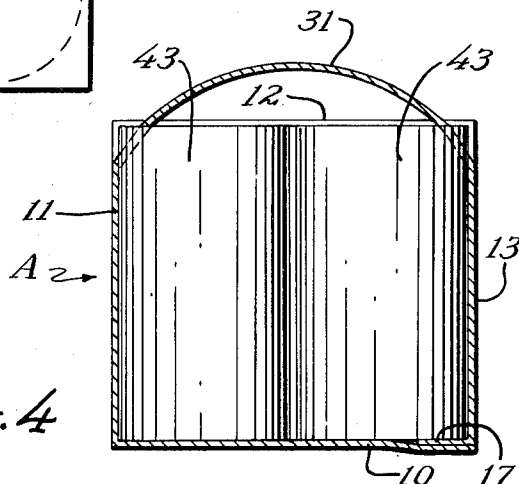


Fig. 4

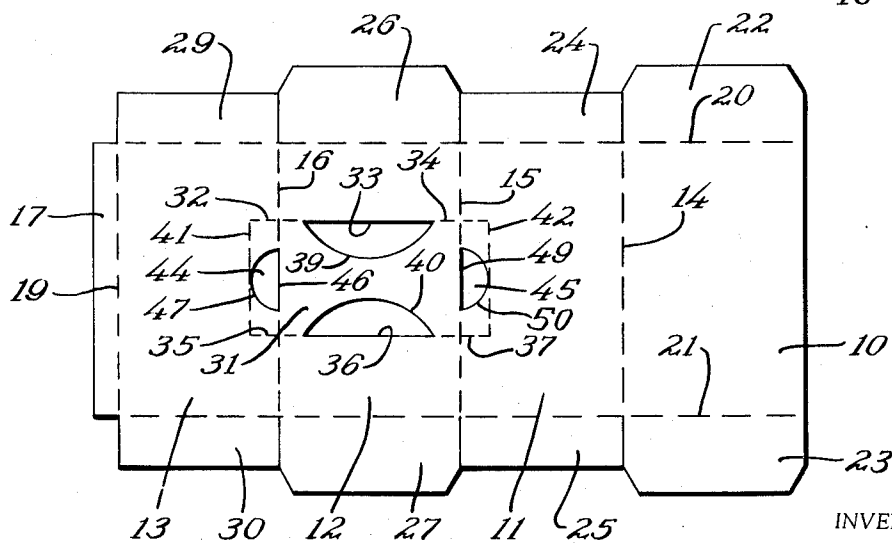


Fig. 5

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CARTON HANDLE

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4 Claims. (Cl. 206—65)

My invention relates to an improvement in carton handle construction and deals particularly with a carton handle to be used in conjunction with a carton containing a plurality of cans or similar objects.

In the past few years more and more canned goods have been sold in cartons. For the merchandiser this is an advantage, as it has a tendency to cause the customer to purchase more cans than might be individually purchased. For the customer it has the advantage that the packages taken home are more readily handled. The use of such packages has been particularly noticeable in conjunction with canned beer and products of this type. Cartons of this type containing canned goods are usually more easily handled if they are provided with a carrier handle.

An object of the present invention lies in the provision of a simple handle which may be formed in the carton and which requires no additional stock to produce. As the handle may be cut directly from the paperboard of which the carton is formed, a handle may be provided virtually as inexpensively as a similar carton could be formed without the handle.

A feature of the present invention lies in the provision of a handle so designed that the cans may be maintained in an upright position during the carrying operation. Some difficulty is often experienced in providing a handle cut from the paperboard forming the carton and in which the cans may be carried in a vertical position. With the present construction the handle is formed which accomplishes this result and provides a wide area of connection between the handle and the remainder of the carton so that there is little danger of breakage.

An object of the present invention lies in the provision of a handle which is defined by cut lines extending across the top panel and downwardly into the adjoining side panels. Such a construction has been previously employed in my application for patent, Serial No. 108,956, filed August 6, 1949, now abandoned. However, as the handle was cut from the panel overlying the circular ends of the cans, the cans tended to interfere with the upward bowing of the handle unless the handle was relatively narrow. In the present invention the handle actually straddles one or more cans and is connected to the carton side walls along relatively long lines of connection.

A feature of the present invention lies in the provision of a carton handle which is relatively wide and which is designed to extend across one or more can ends. Apertures are formed in the handle capable of accommodating the upper extremity of the can or cans being bridged. As a result the handle is permitted to bow upwardly above the level of the remaining portion of the top panel and at the same time the handle apertures engage the cans in such a way as to strengthen the handle.

These and other objects and novel features of my invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of my specification:

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Figure 1 is a perspective view of my carton in closed position showing the handle formed therein.

Figure 2 is a view similar to Figure 1 showing the handle in upwardly bowed position.

Figure 3 is a top plan view of the filled carton.

Figure 4 is a sectional view through the carton, the position of the section being indicated by the line 4—4 of Figure 3.

Figure 5 is a diagrammatic view of a carton blank from which the carton may be produced.

The carton is illustrated in general by the letter A. As best illustrated in Figure 5 of the drawings, the carton includes a bottom panel 10, a side wall panel 11, a top panel 12, and a side wall panel 13. These panels are connected together along parallel fold lines 14, 15, and 16 respectively. A glue flap 17 is hingedly connected along a fold line 19 to the panel 13. This glue flap 17 is designed to overlap the panel 10 and to be adhesively secured thereto as indicated in Figure 4.

Closing flaps of suitable design close the ends of the carton. Fold lines 20 and 21 define the ends of the bottom, top and side wall panels previously described. All of the closure flaps are secured to the various panels along the fold lines 20 and 21. The bottom panel 10 is provided with closure flaps 22 and 23. The side wall panel 11 is provided with closure flaps 24 and 25. The top panel 12 is provided with closure flaps 26 and 27. The side wall panel 13 is provided with closure flaps 29 and 30. All of the structure described to this point relates to a tubular carton of conventional type.

The handle 31 is defined by parallel lines which extend across the top panel 12 and into the side wall panels 11 and 13. For the purpose of ease in carrying, the center portion of the handle 31 is of reduced thickness. Furthermore, for ease in engaging the handle for lifting the handle out of the plane of the remainder of the top panel, portions of the top panel adjacent to the handle are cut away leaving apertures in the top of the carton. These apertures may if desired be omitted.

One of the parallel lines of separation between the handle and the carton includes a perforated line 32, a cut line 33 and a perforated line 34, all of which are usually aligned. The lines 32, 33, 34 preferably extend parallel to the fold lines 20 and 21 and when the perforations are broken form a continuous line of separation for one side of the handle 31. The perforated lines 32 and 34 intersect the fold lines 16 and 15 respectively and extend on both sides thereof for a short distance.

The second parallel line of separation between the handle 31 and the remainder of the carton includes a perforated line 35, a cut line 36, and perforated line 37. These lines are usually in alignment and the perforated portions 35 and 37 intersect the fold lines 16 and 15 respectively and extend on both sides thereof.

The handle 31 is usually defined along opposite sides by inwardly bowed cut lines 39 and 40 connecting the ends of the cut lines 33 and 36 respectively. The area between the cut lines 33 and 39 is usually stripped out as is also the area between the cut lines 36 and 40. Alternatively the cut lines 33 and 36 could be omitted and the portions of the top panel normally stripped out could remain attached to the top panel 12.

A fold line 41 connects the extremities of the perforated lines 32 and 35, this fold line preferably extending parallel to the fold line 16. Similarly a fold line 42 extending parallel to the fold line 15 connects the ends of the perforated lines 34 and 37. When the handle 31 is pulled upwardly the handle tends to fold along the fold lines 41 and 42 to bow upwardly as indicated in Figure 4. The carton A is designed to hold six cans of canned goods. These cans are illustrated as being arranged in three rows, each row containing two cans. Thus if the handle 31 is

to be centrally located relative to the length of the carton, the handle must straddle the intermediate cans 43.

In order that the handle may bow upwardly, I provide apertures near opposite ends of the handle 31 designed to accommodate an adjoining portion of the can. An aperture 44 is formed in the wall panel 13, while a similar aperture 45 is provided in the wall panel 11. The aperture 44 is defined along one edge by a cut line 46 which substantially corresponds to the fold line 16, or may be spaced parallel thereto inwardly toward the center of the panel 12. A curved line 47 connects the ends of the cut line 46, this curved line 47 being spaced the greatest distance from the line 46 near the center of the line 46. The aperture 45 is similarly provided with a cut line 49 extending along the fold line 15 or parallel thereto inwardly of the panel 12, and a cut line 50 of curved form connecting the ends of the cut line 49.

It will be noted that as the handle 31 is engaged and pulled upwardly the apertures 44 and 45 will accommodate the upper ends of the cans 43, permitting portions of the upper ends of these cans to project through the handle 31. As a result the handle actually straddles the cans 43 and is attached to the carton on opposite sides of these cans. This feature is of importance as it permits the handle to be connected to the carton along elongated lines of connection which are spaced substantially apart. This provides stability of the handle and also increases the strength thereof.

The portions of the handle 31 to either side of the apertures 44 and 45 are usually proportioned so that when the edges 46 and 49 of the apertures 44 and 45 are in engagement with the upper ends of the cans 43, the edges of the handle will also engage against the cans of the next adjacent rows. As a result the handle is reinforced by engagement with the cans and permits the cans to be carried in an upright position.

In accordance with the patent statutes, I have described the principles of construction and operation of my carton handle, and while I have endeavored to set forth the best embodiment thereof, I desire to have it understood that obvious changes may be made within the scope of the following claims without departing from the spirit of my invention.

I claim:

1. A handled carton including a tubular body enclosing a series of aligned cylindrical objects, the body including a top panel overlying and parallel to the entire end of each of the cylindrical objects and a pair of side walls of substantially the same height as the height of the objects connected to opposite sides of said top panel and designed to extend along sides of the cylindrical objects, a handle strap defined by spaced cut lines extending across said top panel and extending down into the side walls, the cut lines in the side walls being spaced a greater distance than the diameter of the cylindrical objects, the handle strap overlying an end of one of said cylindrical objects intermediate the ends of the series of these objects and substantially centered with respect thereto, that portion of the side walls between said spaced cut lines having an opening therethrough at the juncture between the top panel and the side walls, said opening having a height substantially equal to the length of the cut lines in the side walls and of a size to accommodate a portion of the end and adjoining side wall of said one cylindrical object when the handle strap is flexed out of the plane of the remaining portions of the top panel and carton side walls.

2. The structure of claim 1 and in which the top panel

is provided with openings on opposite sides of said handle strap.

3. A handled carton including a tubular body enclosing a series of aligned cylindrical objects, the body including a top panel overlying and parallel to the end of each of the cylindrical objects, and a pair of side walls of substantially the same height as the height of the objects connected at opposite sides of the top panel and designed to extend along sides of the cylindrical objects, a handle strap defined by spaced cut lines extending across said top panel and extending down into the side walls, the cut lines in the side walls being spaced a greater distance than the diameter of the cylindrical objects, the handle strap overlying an end of one of said cylindrical objects intermediate the ends of the series of these objects and being substantially centered with respect thereto, that portion of the side walls between said spaced cut lines being cut to provide spaced strap portions connecting each end of said handle strap to a respective side wall, these strap portions being foldably connected at their lower ends to said side walls, foldably connected at their upper ends to the part of said handle strap lying within said top panel, and separated from the side walls along the sides of the strap portions by the cut lines described, and a cut line adjacent the juncture between said top panel and said side walls extending to the inner edges of said spaced strap portions, whereby when said handle strap is flexed upwardly, said strap portions may incline upwardly and inwardly between adjacent cylindrical objects on opposite sides of said one of said cylindrical objects of said series.

4. A handled carton for containing two parallel rows of cylindrical objects in paired relation, the body including a top panel overlying and parallel to the end of each of the cylindrical objects, and a pair of side walls of substantially the same height as the height of the objects connected at opposite sides of the top panel and designed to extend along sides of the cylindrical objects parallel to the two lines thereof, a handle strap defined by spaced cut lines extending across said top panel and extending down into the side walls, the cut lines in the side walls being spaced apart a greater distance than the diameter of the cylindrical objects, the handle strap overlying an end of one pair of cylindrical objects intermediate the ends of the rows of these objects and being substantially centered with respect thereto, that portion of the side walls between said spaced cut lines being cut to provide spaced strap portions connecting each end of said handle strap to a respective side wall, these portions being foldably connected at their lower ends to said side walls, foldably connected at their upper ends to the part of said handle strap lying within said top panel, and separated from the side walls along the sides of the strap portions by the cut lines described, and a cut line adjacent the juncture between said top panel and said side walls extending to the inner edges of said spaced strap portions, whereby when said handle strap is flexed upwardly, said strap portions may incline upwardly and inwardly between adjacent cylindrical objects on opposite sides of said one of said cylindrical objects of said series.

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