

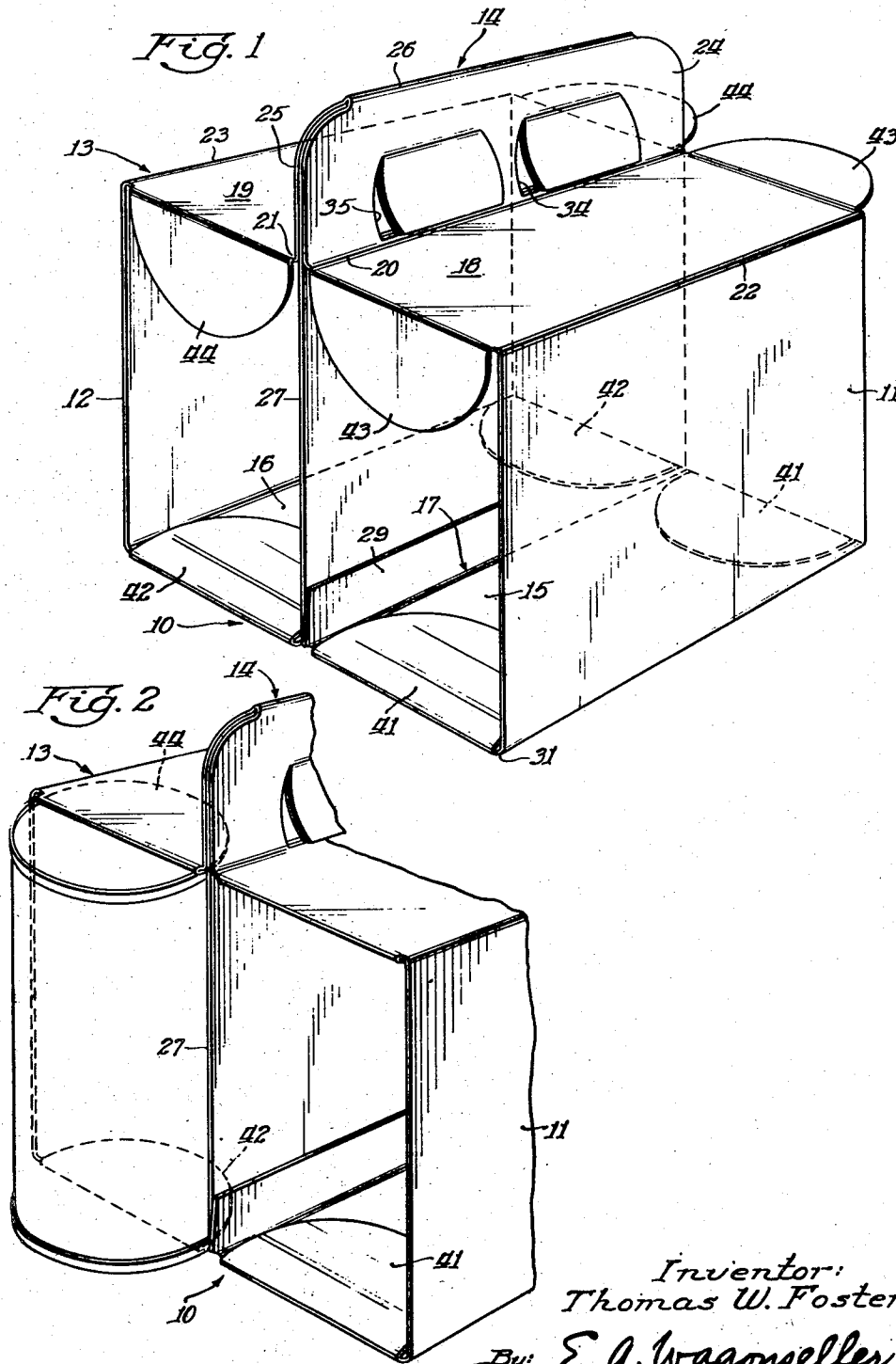
Sept. 26, 1950

T. W. FOSTER
CARRIER FOR CHIMED CANS

2,523,985

Filed July 22, 1949

2 Sheets-Sheet 1



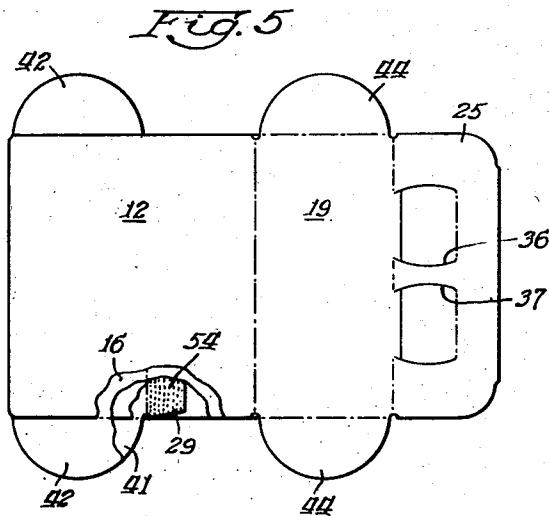
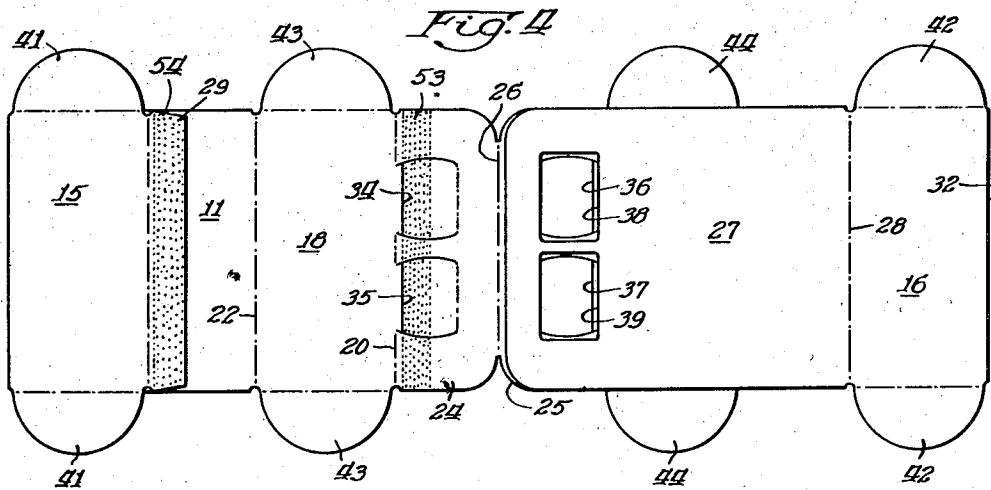
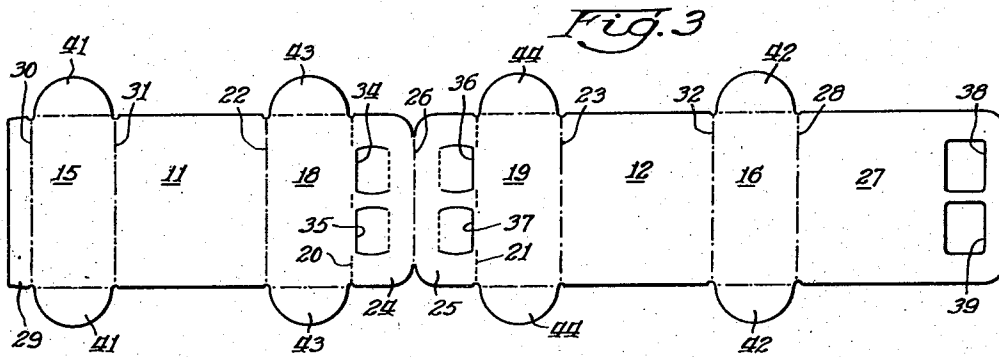
Sept. 26, 1950

T. W. FOSTER
CARRIER FOR CHIMED CANS

2,523,985

Filed July 22, 1949

2 Sheets-Sheet 2



Inventor:
Thomas W. Foster

By: E. A. Wagonseller
att.

UNITED STATES PATENT OFFICE

2,523,985

CARRIER FOR CHIMED CANS

Thomas W. Foster, Chicago, Ill., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware

Application July 22, 1949, Serial No. 106,260

3 Claims. (Cl. 224-45)

1

The present invention relates to carriers or holders for chimed cans and more particularly relates to collapsible carriers or holders adapted to be constructed of foldable paperboard or other foldable sheet material.

Among the objects of the invention are to provide a carrier or holder of the type referred to which can be manufactured from foldable paperboard and which will have a rugged and sturdy construction and at the same time will be produced from a minimum amount of material. Another object is to provide a carrier or holder of this type which is provided with an upwardly extending carrying portion and which can be formed from a single blank of paperboard suitably creased and cut so that the parts may be secured by adhesive or other securing means to produce the finished carriers in flat, collapsed form ready for delivery to a user and capable of being conditioned for use by him without requiring tools or special skill, whereby the carriers may be quickly set up and filled with cans or similar articles ready for delivery to a retail store customer.

In the drawings illustrating a preferred embodiment of the invention:

Fig. 1 is a perspective view of a carrier embodying the present invention illustrating the members for retaining cans in place therein;

Fig. 2 is a fragmentary perspective view, similar to Fig. 1, showing the carrier with a can contained therein and illustrating the manner of retaining cans within the carrier;

Fig. 3 is a view illustrating a preferred form of blank from which the carrier is manufactured;

Fig. 4 is a view illustrating the blank of the carrier in partially assembled condition as it appears after passing through the first step in the gluing operation; and

Fig. 5 is a plan view illustrating the carrier as it appears in collapsed condition ready for shipment to the user.

The carrier of the present invention is preferably formed to provide a convenient carryout for a retail store customer to take home six cans of beverage, and the carrier is particularly designed for cans that have recessed or chime-type tops and bottoms. The carrier preferably is made with a carrying portion and partition portion disposed centrally between two side wall panels, the partition portion being connected with a foldable bottom portion and there being top portions which extend between the partition and carrying members and the side walls and are in hinged relation thereto whereby the carrier is adapted

2

to be collapsed and retained in collapsed condition until it is ready to be filled with cans by sliding the cans into the open ends of the carrier. The longitudinal dimension of the top and bottom portions is less than the length of a row of cans inserted within the carrier whereby the end cans in each row will project partially outside of the carrier. The top and bottom portions are provided with inwardly bendable tabs past which the cans are adapted to slide and such tabs, due to the resilience of the paperboard of which the carrier is made, will tend to move away from their attached portions as soon as the advancing portion of the chime edge of the can is moved out of contact with the tab. The free ends of the tabs will then move a small distance inwardly toward the can ends and engage the inner surface portion of the chimes thereby serving as retaining elements tending to prevent outward movement of the upper and lower portions of the can.

Referring more particularly to Fig. 1 of the drawings, the carrier as herein disclosed comprises a bottom portion, indicated generally at 10, side walls 11 and 12, a top portion indicated generally at 13, and a central panel and handle portion indicated generally at 14. The bottom portion 10 comprises two panels 15 and 16 hingedly related to each other and to the central panel along a fold line indicated generally at 17. The top portion 13 comprises two parts 18 and 19 hingedly connected along fold lines 20 and 21 respectively to the central panel portion.

The top portions 18 and 19 are in the present instance formed integrally with the side walls along hinge lines 22 and 23 and are formed integrally with carrying panels 24 and 25 connected thereto along the fold lines 20 and 21. These carrying panels are preferably integrally connected along their upper edges at fold line 26.

The lower portion of the central panel and handle portion comprises a panel 27, preferably formed integrally with one of the bottom sections, herein illustrated as bottom panel 16, along fold line 28.

For the purpose of joining and hingedly relating the two bottom panels 15 and 16 the bottom panel 15 is preferably formed with an attaching flap 29, defined from panel 15 by a fold line 30. The flap 29 is suitably secured to the lower portion of the panel 27 preferably by adhesive. The outer edges of the bottom panels 15 and 16 are preferably integrally joined to the respective sides 11 and 12 along fold lines 31 and 32.

In order to strengthen the handle section and at the same time connect the central panel and

3

handle portion to the top portion 13, the upper part of the panel 27 is extended to lie between the carrying sections 24 and 25 and is suitably secured thereto in any desired manner as by means of adhesive or staples.

Finger openings are provided in the carrying section by forming openings 34 and 35 in the part 24, openings 36 and 37 in the part 25, and openings 38 and 39 in the upper end of panel 27. The respective openings 34, 36 and 38 and the openings 35, 37 and 39 are arranged so as to be in substantial registration when the carrier is completely assembled.

The stock within the openings 34, 35, 36 and 37 is preferably left attached to the upper edges of the openings whereby tab elements are provided that can be swung laterally of the carrying section to provide for greater comfort to the fingers of the person holding the carrier.

As thus far described, a carrier or holder is provided which has two open end compartments disposed side by side, each of which will hold a row of cans or other articles, one row being disposed between the central panel and side wall 11 and the other row between the central panel and side wall 12. The articles are introduced into the compartments of the carrier through the open ends. While the carrier can be used for four, six, eight or more cans, the carrier as herein illustrated is designed for six cans in two rows of three cans each and, for convenience, will be so described.

According to the present invention means are provided on the top and bottom sections for engaging the inner chime portions on the tops and bottoms of the outer cans of each row. Depending on the diameter of the can the top and bottom panels are substantially two can diameters in length. Stated another way, the panels will have a length equal to one less than the number of cans in a row times the can diameter.

The means for engaging a portion of the can chimes comprises tabs 41, 41 and 42, 42 at the ends of bottom panels 15 and 16 respectively, and tabs 43, 43 and 44, 44 at the ends of the top panels 18 and 19 respectively. The tabs are each foldable inward relative to the panel to which it is attached along the fold lines indicated so that each tab may be swung to assume a position flat against its attached bottom and top panel. Each of the tabs is preferably made semi-circular and on a radius substantially equal to the radius of the circle described by the inside surfaces of the chimes of the cans for which the carrier is intended.

In the use of the carrier, a collapsed carrier such as shown in Fig. 5 will be grasped by the carrying portion with one hand while the user's other hand is employed to expand the side wall portions away from the central panel. The handle portion will then be forced down which will cause the bottom panels as well as the top panels to be brought into alignment after which the top and bottom tabs at each end of the carrier will be turned inwardly. The carrier is now ready to receive cans.

A convenient packing procedure is to insert two cans at the end of each of the compartments and insert the third can in each compartment from the other end. With the top and bottom tabs folded inwardly the tabs will not lie flat due to the resiliency of the paperboard.

When the middle can is in place and the outer can at each end is moved past the top and bottom tabs each tab will spring toward the recessed

4

bottom of the can and will engage edgewise against the inner surface of the chime and lock the can ends against outward displacement.

When it is desired to remove a can from the carrier this can conveniently be done by inserting a bladed instrument between the can top and the top tab to release the tab from the top chime. The can can then be removed by tilting it outwardly until the upper portion is clear of the top flap whereupon the can may be lifted free of the lower chime engaging tab.

By forming the carrier from a single blank in which all the panels are in line a very economical carrier is provided. This form of blank also is economical to assemble as assembly can be effected on standard carton folding and gluing machines.

In the gluing operation the blanks as illustrated in Fig. 3 are fed into a suitably adjusted folding and gluing machine. As the blank advances adhesive will be applied either to the opposite surfaces of the end of the central panel 27 or to the under surfaces of the carrying sections 24 and 25. Adhesive is preferably applied to these latter surfaces, as indicated at 53, 53 in Fig. 3. Adhesive is also applied to attaching flap 29, as indicated at 54, preferably at the same time it is applied to the carrying sections 24 and 25. After application of the adhesive the blank will be moved past the folding station which will cause the panels 16 and 27 to fold upwardly and over along the fold line 32 so that these panels will lie flat against panels 12, 18 and 26. Preferably at the same time panel 15 with its attaching flap 29 will be folded along fold line 31. The blank will then have the appearance as illustrated in Fig. 4.

The next step in the gluing operation is to fold the partially assembled blank along fold line 26 so that the parts 25, 19 and 12, with the parts 15 and 29 lying thereagainst will be folded over so that the lower edge of the panel 27 will come into contact with the freshly glued attaching flap 29 whereupon the carrier will be brought to its collapsed condition ready for shipment to a user as illustrated in Fig. 5.

While the present description sets forth a preferred embodiment of the invention, certain changes may be made in the construction without departing from the spirit of the invention, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not descriptive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

I claim:

1. A collapsible paperboard carrier for chime-type cans of predetermined height and diameter, such carrier comprising two hingedly related bottom panels, two hingedly related top panels, side walls hingedly connected at top and bottom edges respectively with the outer edges of the top and bottom panels, two upwardly extending carrying panels hingedly connected respectively to the inner edge of each top panel, and a partition panel hingedly connected to the inner edges of the bottom panels and extending upwardly through the central part of the holder with its upper end between the carrying panels, whereby the carrier is divided into two open end compartments into which a row of cans is adapted to be received in snug fitting relation, each of the top and bottom panels having on each end thereof, and at each side of the partition panel,

5

an inwardly foldable tab adapted to engage the top and bottom chimes respectively of chime-type cans inserted partially into the compartments.

2. A collapsible paperboard carrier comprising a pair of tubular sleeve members having top, side, and bottom walls and a common central partition member, each of said sleeve members being adapted to receive a row of cans having at least one chime-type closure, a handle hingedly related to said top walls and said partition member, and means for retaining said cans at least partially within the sleeve members, said retaining means including a plurality of inwardly foldable tabs adapted to engage edgewise against the inner surfaces of the chimes of at least some of said cans. 10 15

3. A collapsible paperboard carrier comprising a tubular member defined by top, side, and bottom walls and adapted to receive a row of cans having at least one chime-type closure, a handle hingedly related to the top wall, and means for retaining 20

6

said cans at least partially within the tubular member, said retaining means comprising a plurality of inwardly foldable tabs adapted to engage edgewise against the inner surfaces of the chimes of at least some of said cans.

THOMAS W. FOSTER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,854,955	Reaume et al. -----	Apr. 19, 1932
1,888,855	Fuller -----	Nov. 22, 1932
2,222,211	Arneson -----	Nov. 19, 1940
2,302,676	Crane -----	Nov. 24, 1942
2,337,197	Holy -----	Dec. 21, 1943
2,402,219	Wesselman -----	June 18, 1946
2,425,140	Allen -----	Aug. 5, 1947