April 9, 1940. B. F. KELLS 2,196,502

CONTAINER

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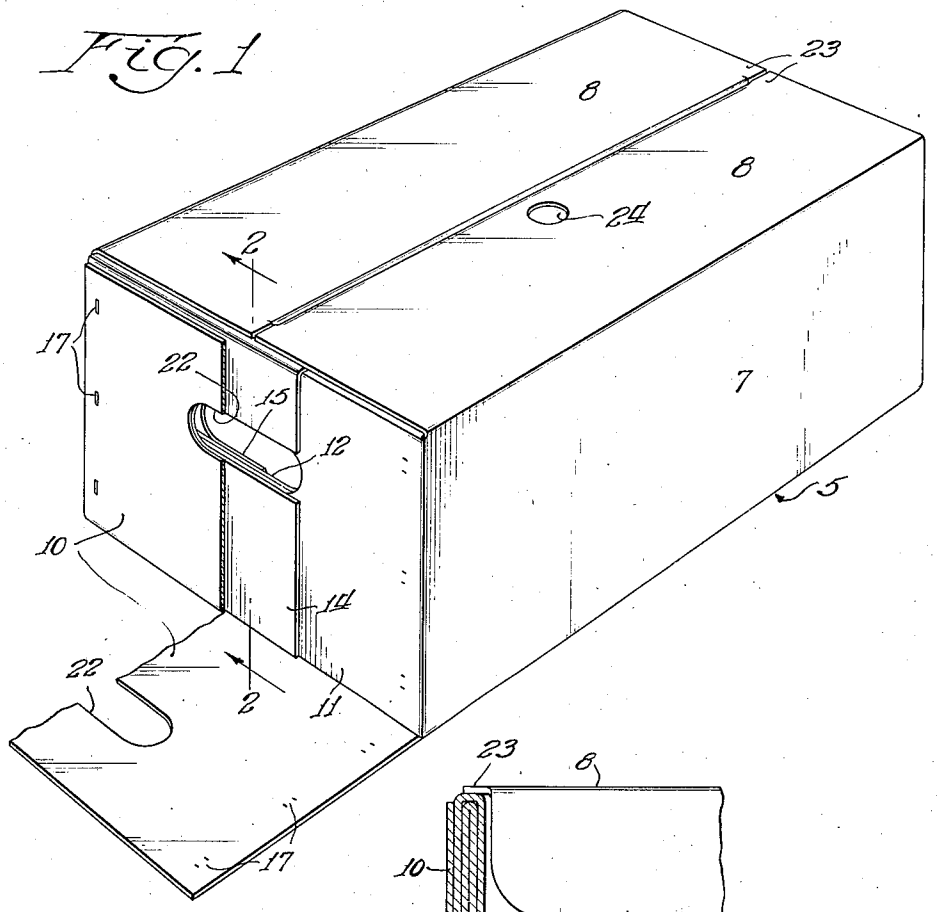
Fig. 1



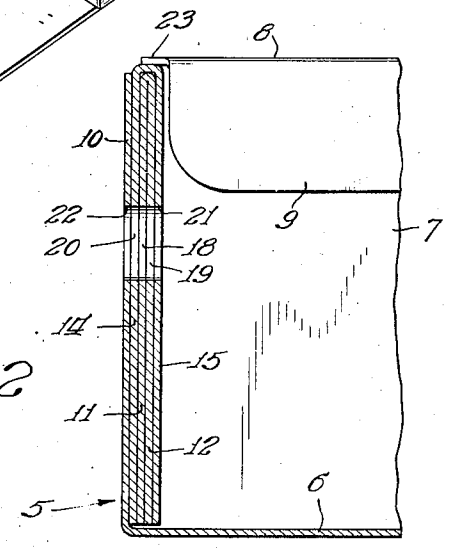


Fig. 2

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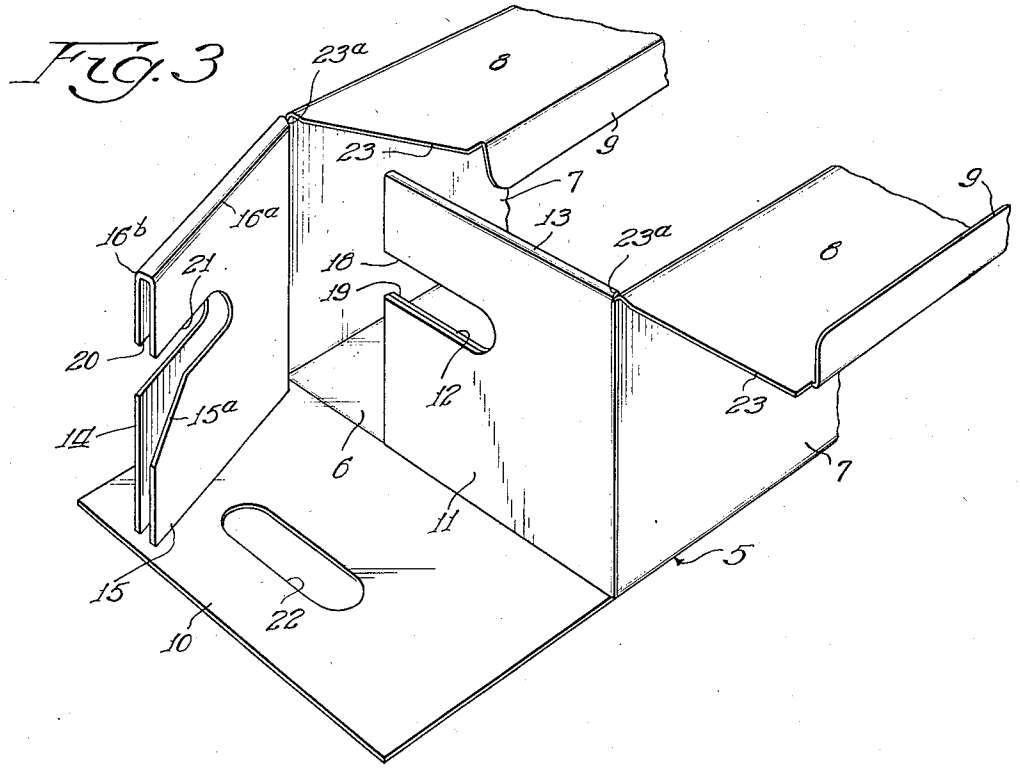
Fig. 3



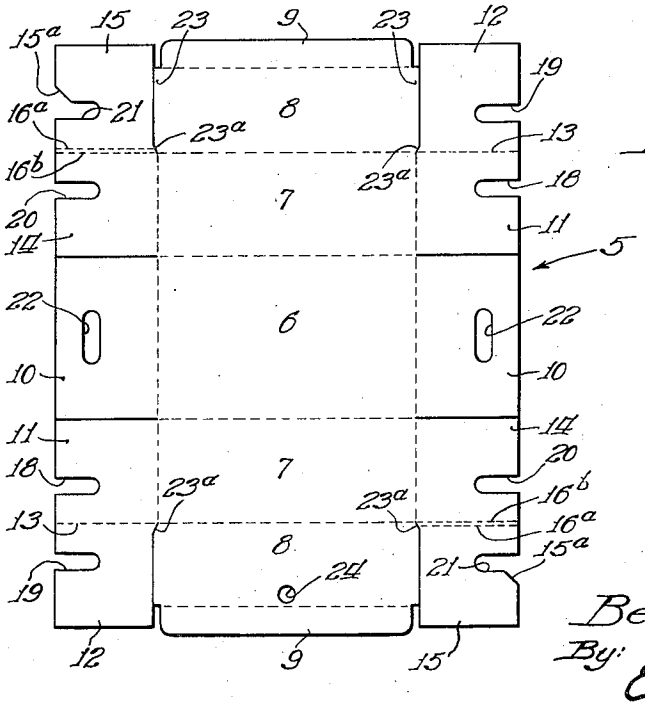


Fig. 4

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UNITED STATES PATENT OFFICE

2,196,502

CONTAINER

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Application February 15, 1939, Serial No. 256,426

5 Claims. (Cl. 229—52)

The present invention relates to containers and more particularly to containers arranged to be conveniently carried by hand and adapted to hold articles such as bottles.

One object of the invention is to provide an effective, sturdy form of container having a reinforced end construction providing for finger openings whereby the container may readily be carried.

Another object is to provide an efficient form of closure construction for the container.

A further object is to so construct the container from a single blank of material so as to reduce waste to a minimum and provide for adequate strength of parts particularly at the ends where the weight of the container is to be carried.

Other and more detailed objects will appear as the description proceeds.

In the drawings, illustrating a preferred embodiment of the invention:

Fig. 1 is a perspective view of a container, made in accordance with the present invention, showing a portion of the end as it would appear if torn away from the remaining portion and folded down;

Fig. 2 is a fragmentary sectional view taken along line 2—2 looking in the direction of the arrows;

Fig. 3 is a fragmentary perspective view of parts of the container illustrating details of the end wall construction and closure elements; and

Fig. 4 is a plan view of the blank for the container.

Similar reference characters throughout the several views refer to the same parts.

The container of the present invention is particularly suitable for use in the transportation of bottled beverages where a returnable container is desired. Due to the construction of the end wall and the arrangement of the closure parts with relation thereto, the container may be readily carried without likelihood of becoming distorted with consequent tearing of the container and injury to the contents.

Referring more particularly to the drawings, the container, indicated as a whole at 5, is preferably formed from a single blank of paper, fibreboard or corrugated paper board. The container blank is suitably cut and scored to provide a bottom panel 6, side wall panels 7, 7, cover members 8, 8, cover edge flaps 9, 9 and end panels 10, 10.

In order to reinforce the ends of the container, additional flaps are provided on the ends of the side walls to cooperate with the end panels 10, 10 to thus form end walls of multiple thickness. In the present instance, each side wall 7, 7 has an end flap 11 on one end thereof. Each flap 11 has an extension 12 separated from its flap by a narrow score line 13 allowing the extension 12 to be folded over and laid flat against the flap 11. See Figs. 2 and 3.

Each side wall 7, 7 has another end flap 14 at the ends opposite the flaps 11, 11. These flaps each have an extension 15 separated therefrom by a relative wide score line or hinge portion indicated by the dotted lines 16a and 16b. Due to the provision of this relatively wide hinging portion the hinge line of the flaps 14 and their extensions will be somewhat separated, the separation being substantially equal to the double thickness of material formed by the parts 11 and 12 when lying flat against each other. By this construction, as best illustrated in Figs. 1 and 2, it is readily possible to bring the end portion of the flap and extension 14 and 15 into overlapping or encompassing relation with the end portion of assembled flap and extension 11 and 12.

When the pairs of flaps and extensions are thus assembled the end wall panel 10 is ready for assembly with such parts. The end wall panel is preferably secured against the outside of the flap and extension assembly by suitable securing means such as staples 17, 17.

To provide finger apertures the flaps 11 and extensions 12 are preferably formed with openings or notches 18 and 19 respectively, and the flaps 14 and extensions 15 are formed with openings or notches 20 and 21 spaced so as to accurately register with the respective notches 18 and 19 in the assembled position of the end wall. The end panels 10, 10 are formed with openings 22, 22 to register with the apertures formed by the registering openings 18, 19, 20 and 21. As best seen in Fig. 2, a lifting surface comprising the edges of five thicknesses of material is provided at each finger aperture.

The extent of overlap of the flaps and extensions 11 and 12 with the flaps and extensions 14 and 15 is preferably such as to cause the respective edges of these parts to extend somewhat past the openings in opposite parts. It is thus unnecessary to elongate the flaps and extensions outwardly of the blank and, by so doing, waste along the longitudinal edges of the blank is eliminated.

The closure members 8, 8 are preferably each formed with edge portions 23, 23 extended somewhat beyond the ends of the side walls 7, 7. See Fig. 4. These extended portions 23, 23 in the

set-up position of the container, will rest upon the top edges of the end walls. See Figs. 1 and 2. The cover elements are thus prevented from passing down into the open top of the container.

It is to be noted that the extended portions 23 on the closure elements 8, 8 are provided by somewhat lessening the transverse extent of the flap extensions 12, 12. This feature provides a desirable relationship between the inner faces of the side walls 7, 7 and the adjacent edges of the flap extensions 12, 12 for the reason that these flaps must be lesser in extent than the flaps 11, 11 by at least the thickness of the material of the container in order to prevent undue jamming of the edges of flaps 12, 12 into the vertical corners of the container.

The flaps 9, 9 are preferably cut off at their ends so that the end edges will fit down within the inside surfaces of the end walls. See Fig. 2. Due to this relationship any tendency of the container to assume a shape other than rectangular, as by careless handling, will be opposed by the endwise contact of the flaps 9, 9 against the inner faces of the end walls.

To provide for ready lifting of the closure members at least one of these members is preferably formed with a finger opening 24.

If desired, the flaps 15, 15 may be somewhat cut away, as indicated at 15a, 15a, at the openings 21, 21. By so doing, use of the container with bottles is somewhat facilitated. For example, if the container is provided with partition units for the reception of bottles and the space is such that one bottle would strike the inner exposed corner of the flap 15, the cutting away of the flap at 15a will eliminate the likelihood of a bottle striking this flap, upon insertion of the bottle, with sufficient force to tear it, as the bottom of the bottle will merely strike the inclined surface 15a and slide off of such surface before it can exert sufficient force to tear the flap.

From the foregoing it is apparent that the present invention provides a strong, durable container well suited for carrying in the hands and having closure parts that not only assure that the closure will remain in place but in addition assure the container from getting substantially out of a rectangular shape.

While the present description sets forth a preferred embodiment of the invention, numerous 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 restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

I claim:

1. A container formed of folding paperboard comprising a bottom, two side walls, side wall end flaps on the ends of each side wall, one side wall end flap having an extension thereon separated therefrom by a score line formed so as to enable the extension to be folded to lie flat on the end flap, the other side wall end flap having an extension thereon separated therefrom by a wide scored section formed so as to cause the flap to be hinged along a line spaced from the end flap a distance substantially equal to the combined thickness of the opposite end flap and extension, whereby the end flap and extension separated by the wide scored section may be placed over the other flap and extension to provide an end wall having at least a portion thereof formed of four thicknesses of material.

2. A container formed of folding paperboard comprising a bottom, two side walls, an end wall panel extending from each end of the bottom, side wall end flaps on the ends of each side wall, one side wall end flap having an extension thereon separated therefrom by a score line formed so as to enable the extension to be folded to lie flat on the end flap, the other side wall end flap having an extension thereon separated therefrom by a wide scored section formed so as to cause the flap to be hinged along a line spaced from the end flap a distance substantially equal to the combined thickness of the opposite end flap and extension, whereby the end flap and extension separated by the wide scored section may be placed over the other flap and extension, and means for securing the end wall panel to the assembled end flaps and extensions.

3. A container formed of folding paperboard comprising a bottom, two side walls, a closure flap on the free edge of each side wall arranged to close approximately one half of the container, side wall end flaps on the ends of each side wall, one side wall end flap having an extension thereon separated therefrom by a score line formed so as to enable the extension to be folded to lie flat on the end flap, the other side wall end flap having an extension thereon separated therefrom by a wide scored section formed so as to cause the flap to be hinged along a line spaced from the end flap a distance substantially equal to the combined thickness of the opposite end flap and extension, whereby the end flap and extension separated by the wide scored section may be placed over the other flap and extension to provide end walls for the container, said closure flaps having extended portions on their edges adjacent the ends of the container adapted to rest upon the upper edges of the container end walls, said extended portions being formed by cutting away a part of the extensions on the side wall end flaps.

4. A container formed of folding paperboard comprising a bottom, two side walls, a closure flap on the free edge of each side wall arranged to close one half of the container, a flap on the free edge of each closure flap arranged to be folded down within the container, an end wall panel extending from each end of the bottom, side wall end flaps on the ends of each side wall, one side wall end flap having an extension thereon separated therefrom by a score line formed so as to enable the extension to be folded to lie flat on the end flap, the other side wall end flap having an extension thereon separated therefrom by a wide scored section formed so as to cause the flap to be hinged along a line spaced from the end flap a distance substantially equal the combined thickness of the opposite end flap and extension, whereby the end flap and extension separated by the wide scored section may be placed over the other flap and extension, and means for securing the end wall panel to the assembled end flaps and extensions.

5. A container formed of folding paperboard comprising a bottom, two side walls, side wall end flaps on the ends of each side wall, one side wall end flap having an extension thereon separated therefrom by a score line formed so as to enable the extension to be folded to lie flat on the end flap, the other side wall end flap having an extension thereon separated therefrom by a wide scored section formed so as to cause the flap

to be hinged along a line spaced from the end flap a distance substantially equal to the combined thickness of the opposite end flap and extension, whereby the end flap and extension separated by the wide scored section may be placed over the other flap and extension to provide an end wall having at least a portion thereof formed of four thicknesses of material, each of the flaps and flap extensions having finger openings formed therein and arranged to register with each other in the set-up position of the container.

BENJAMIN F. KELLS.