June 29, 1937. E. M. BOURLAND 2,085,292

CONTAINER

Filed Nov. 28, 1934

Fig. 1

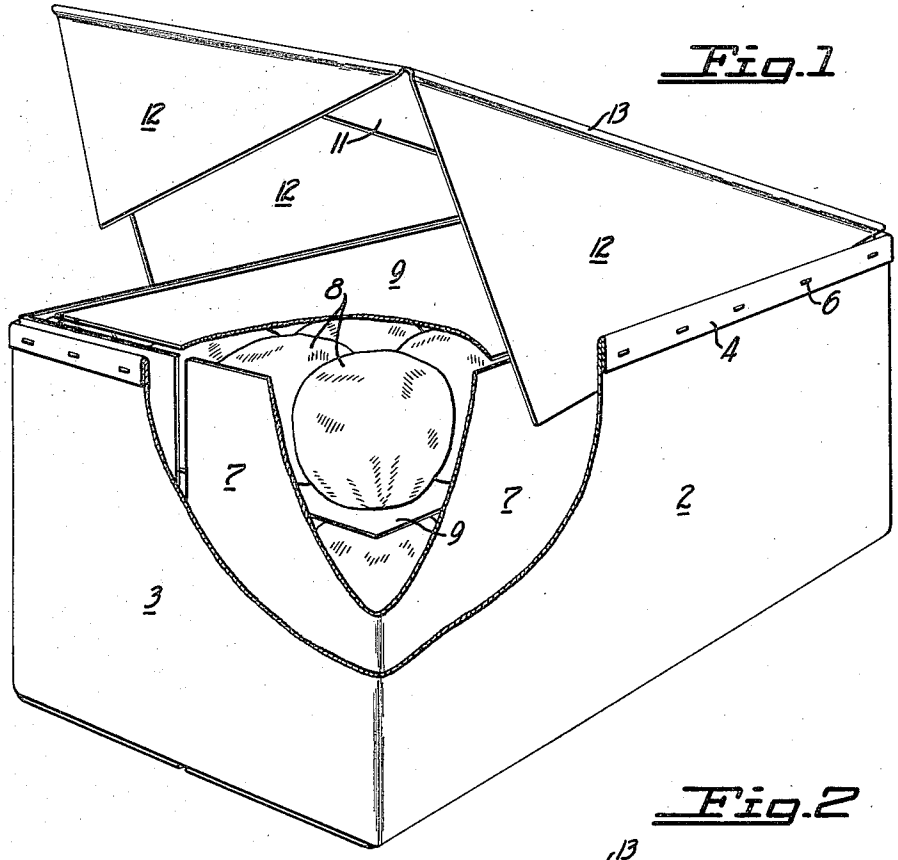


Fig. 2

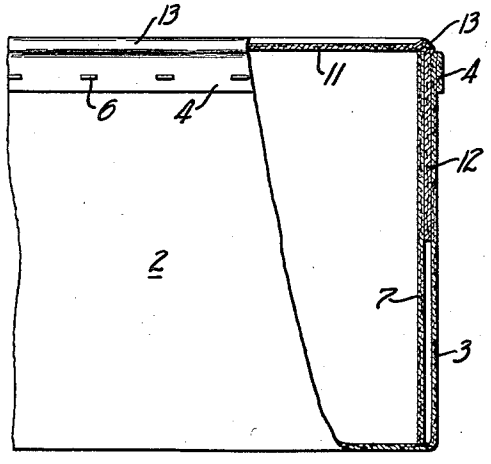
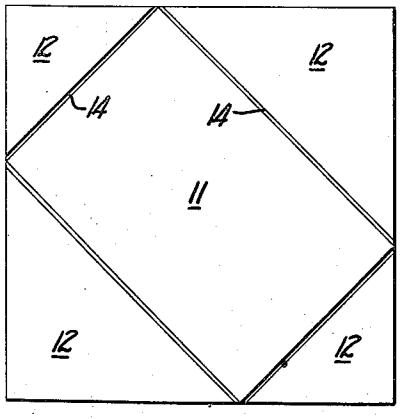


Fig. 3



INVENTOR.
EDDIE MARTIN BOURLAND.
BY Charles S. Evans
HIS ATTORNEY

Patented June 29, 1937 2,085,292

UNITED STATES PATENT OFFICE

2,085,292

CONTAINER

Eddie Martin Bourland, Puyallup, Wash., assignor to Fibreboard Products Inc., San Francisco, Calif., a corporation of Delaware

Application November 28, 1934, Serial No. 755,143

4 Claims. (Cl. 229—43)

My invention relates to containers, and more particularly to shipping containers for perishable articles, such as fruit.

It is among the objects of my invention to provide a packing case which may be readily opened for inspection while enroute during shipment.

Another object is to provide a shipping container of the character described which may be quickly and easily reclosed after inspection, without damage to either the container or its contents.

Still another object of my invention is to provide a container of the character described which is tightly sealed, both before and after the temporary opening.

Other objects of my invention are to provide a shipping container which is of light weight; which does not mar or bruise its contents; and which is readily stacked with a minimum of waste space.

Still further objects of my invention include the provision of a container possessed with the above mentioned advantages, and also characterized by a simplicity of construction and ruggedness of design.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth in the following description of my invention. It is to be understood that I do not limit myself to this disclosure of species of my invention, as I may adopt variant embodiments thereof within the scope of the claims.

Referring to the drawing:

Figure 1 is a perspective view of a container embodying the improvements of my invention, portions of the structure being broken away to illustrate the construction more clearly.

Figure 2 is a side view of the container with the corner broken out to show the walls and cover construction.

Figure 3 is a plan view showing the cover blank.

In terms of broad inclusion the container embodying my invention comprises an outer receptacle having side and end walls, a liner in the receptacle and having walls spaced from the receptacle walls, and a cover having downwardly extending locking tabs interengaged between the walls of the receptacle and liner. The walls of the outer receptacle are preferably of a stiff material, while the liner walls are relatively flexible. These features, coupled with the fact that the liner walls are coextensive with and freely spaced from the receptacle walls, cause the liner walls to be pressed outwardly against the stiffer walls of the receptacle by reason of the outward pressure exerted by the contents of the container. This operates to firmly clamp the cover tabs between the walls of the liner and receptacle. In order to reinforce the upper edges of the receptacle, and to provide a hand hold for lifting the container, a strip, preferably comprising an integral part of the receptacle wall structure, is provided about the upper outer edges of the receptacle. The cover having the locking tabs is preferably formed as a separate structural unit and is preferably folded from a one-piece blank of material.

In greater detail, and referring particularly to Figures 1 and 2 of the drawing, the container embodying my invention comprises an outer receptacle, preferably of generally rectangular shape, having side walls 2 and end walls 3. This outer receptacle is preferably relatively stiff to resist the handling coincident with packing and shipping, and may be of any suitable material, such as fiberboard. In order to reinforce the upper edges of the receptacle, and to provide a hand hold for lifting the container, a strip 4 of suitable material is preferably provided along its upper outer edges.

The strip 4 also operates to space the containers for ventilation when stacked. As shown, this strip is preferably formed by folding back the upper edge portions of the receptacle walls. Any suitable means, such as the staples 6, may be provided for fastening the strip 4 to the body of the receptacle walls.

A liner 7 of suitable material, such as corrugated fiberboard, and preferably somewhat more flexible than that comprising the outer receptacle, is provided inside the receptacle so that its walls are substantially coextensive with and spaced slightly inwardly from the receptacle walls. This spacing is clearly shown in Figure 2. The liner is preferably folded from a single sheet of material and is preferably arranged with the free ends juxtaposed adjacent one end of the container, as best shown in Figure 1. Preferably the upper edges of the liner project slightly above the edges of the outer receptacle.

As shown in Figure 1, the contents of the container, such as the wrapped fruit 8, are preferably packed in layers inside the liner 7, suitable spacers 9 being preferably provided between the layers and along the top and bottom of the pack. Because the spacers 9 and lines 7 lie adjacent the fruit they are preferably provided with a degree of resilience to form protective pads. Corrugated sheets have the desired resilience and are preferably employed in making up the structural elements 7 and 9.

The cover of my improved container comprises

a flat, rectangular lid 11 overlying the receptacle and resting upon the projecting upper edges of the liner 7. The cover is held in closed position by locking tabs 12 extending downwardly from the edges of the lid 11 and slidably interengaged between the spaced walls of the outer receptacle and liner. The cover is formed as a separate structural unit, and preferably a locking tab 12 is provided along each edge of the lid 11. By this arrangement the cover may readily be mounted on or removed from the container. When the cover is in the down position the outward pressure of the fruit presses the liner walls outwardly against the stiffer walls of the receptacle. This operates to firmly clamp the cover tabs 12 between the walls of the receptacle and liner. The cover resists displacement under any ordinary conditions of handling, but is easily removed and replaced, without damage to either container or contents, at any time an inspection of the contents is desired.

In order to assist in the insertion and withdrawal of the cover tabs 12, these tabs are preferably provided with sloping edges. A triangularly-shaped tab has been used with excellent results. For purposes of appearance and structural value I also preferably provide an external bead 13 along the junctures between the tabs 12 and lid 11. This bead lies between the upper edges of the liner 7 and receptacle walls 2 and 3. The sectional portion of the view in Figure 2 clearly illustrates the position of this bead. The cover is preferably folded from a sheet of suitable material, such as fiberboard. Figure 3 illustrates the cover blank, which is of a generally rectangular or square shape, and is provided with rectangularly disposed crease lines 14 extending diagonally of the blank and terminating at the edges thereof to provide the rectangular lid 11 bounded along each edge by the triangularly-shaped tabs 12.

The crease lines 14 are of substantial width, say about 3/8 or 1/4 inch, and are pressed out from the inside of the blank to form the outside bead 13 along the juncture between the lid and tabs when the latter are folded down. This formation of the cover unit provides a very simple construction.

One of the very important features of my improved container is the ease with which it may be opened and closed, without damaging either the container or its contents. This temporary opening and reclosing of a fruit shipping container is very important. It is the practice among fruit buyers to sample carloads of the product while the latter is enroute during shipment from the western to the eastern parts of this country. A carload of fruit may be sampled many different times before it finally reaches the Eastern States. During these samplings the prospective purchasers open a new case of fruit and take out one or more of the contents for purposes of examination. If satisfied the prospect will make a purchase, otherwise not.

By reason of this practice the cases of fruit which finally reach the Eastern market will not be accepted on the same basis as a fresh carload of fruit. A reduction in price of as much as ten or twenty-five cents a box is often experienced. This reduction in price results from the bad impression made by a car containing cases many of which have their covers ripped off and otherwise damaged by reason of the numerous inspections. By the use of the improved container embodying my invention this reduction in price is avoided by reason of the fact that the cases may readily be opened and reclosed. When my improved cases are employed they reach their final destination with as pleasing and undamaged appearance as when they started, irrespective of how many times a case might have been opened for inspection during the period of shipment.

Another feature of my invention is that the container weighs less, and consequently costs less for freight, than does the ordinary wooden crate. Another improved feature of my container is that the fruit may be properly packed without the arched-over-top characteristic of the wooden crates. The arched top is undesirable because it makes a crate difficult to stack, and results in a good deal of waste space in the stacks. Furthermore, the arched top wooden crate results in the loss of considerable fruit by reason of the bruising which occurs. These losses are eliminated in my improved container. Still another important feature of my construction is that a substantially airtight seal is provided for the fruit. Experience has proven that certain fruits, such as apples, are preserved in better condition if air circulation is eliminated. An especially important feature of my improved container is that a tight seal is provided, both before and after a temporary opening for inspection.

I claim:

1. A shipping container adapted to be partially opened for inspection without damaging the container, comprising an outer receptacle having side and end walls, a strip secured along the upper outer edges of said walls, a liner having walls adapted to be pressed outwardly against the receptacle walls by the contents of the container, and a cover having downwardly extending locking tabs frictionally held between said walls but free to be withdrawn to open the cover for inspecting the contents of the container, one of the tabs being hingably connected to the cover to provide a hinge mounting for opening the cover.

2. A shipping container adapted to be partially open for inspection without damaging the container, comprising an outer receptacle having side and end walls, a strip secured along the upper outer edges of said walls, a liner having walls adapted to be pressed outwardly against the receptacle walls by the contents of the container, and a cover having downwardly extending locking tabs frictionally held between said walls but free to be withdrawn to open the cover for inspecting the contents of the container, each of said tabs being hingably connected to the cover to provide a plurality of hinge mountings for opening the cover from any desired side of the container.

3. A shipping container adapted to be partially opened for inspection without damaging the container, comprising an outer receptacle having side and end walls, a one-piece liner loosely disposed in the receptacle and arranged with its free ends juxtaposed so that the walls of the liner are free to be pressed out against the receptacle walls by the contents of the container, and a cover comprising a blank having diagonal crease lines providing a rectangular lid bounded along each side by a triangular tab folded down from the lid and frictionally engaged between said walls but free to be withdrawn to open the cover for inspecting the contents of the container, said folding of the tabs on the crease lines providing a plurality of hinge mountings for opening the cover from any desired side of the container.

4. A shipping container adapted to be partially opened for inspection without damaging the container, comprising an outer receptacle having side and end walls, a one-piece liner loosely disposed in the receptacle and arranged with its free ends juxtaposed so that the walls of the liner are free to be pressed out against the receptacle walls by the contents of the container, and a cover comprising a blank having diagonal crease lines providing a rectangular lid bounded along each side by a triangular tab folded down from the lid and frictionally engaged between said walls but free to be withdrawn to open the cover for inspecting the contents of the container, said folding of the tabs on the crease lines providing a plurality of hinge mountings for opening the cover from any desired side of the container, the crease lines being pressed out from the underside of the cover blank to provide outside beads along the edges of the lid.

EDDIE MARTIN BOURLAND.