

April 7, 1925.

1,532,316

F. M. KAUFMAN

COLLAPSIBLE BOX

Filed July 14, 1924

Fig. 1.

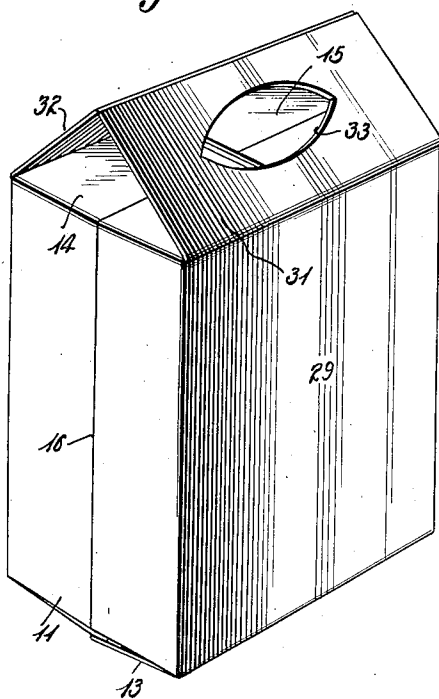


Fig. 2.

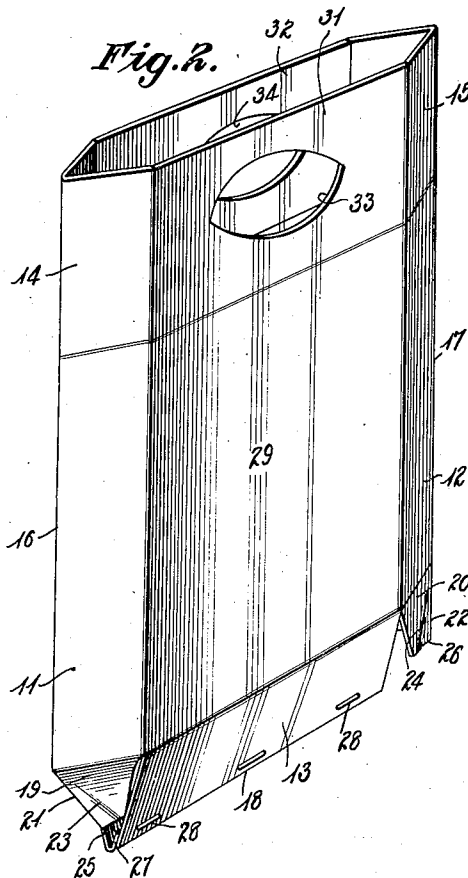


Fig. 3.

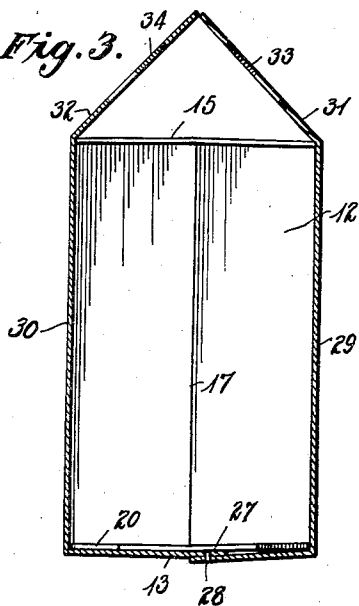
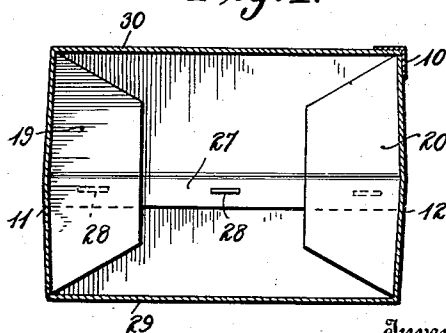


Fig. 4.



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UNITED STATES PATENT OFFICE.

FERDINAND M. KAUFMAN, OF ATLANTA, GEORGIA.

COLLAPSIBLE BOX.

Application filed July 14, 1924. Serial No. 725,854.

To all whom it may concern:

Be it known that I, FERDINAND M. KAUFMAN, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Collapsible Boxes, of which the following is a specification.

The invention relates to collapsible boxes, and has as an object the provision of a box which may be expanded and collapsed an indefinite number of times.

A further object of the invention is the provision of a collapsible box which will be maintained in expanded condition by the contents.

A further object of the invention is the provision of a collapsible box with flaps adapted to cover the upper open end of the box when in use, and with handles provided by other flaps at the upper end of the box.

Further objects of the invention will appear from the following description when read in connection with the accompanying drawings showing an illustrated embodiment of the invention, and in which

Figure 1 is a perspective view of the box expanded;

Fig. 2 is a perspective view of the box collapsed, but in the initial stage of expansion;

Fig. 3 is a central vertical transverse view of the box expanded; and

Fig. 4 is a horizontal section looking downwardly.

As shown the box is formed of a substantially rectangular blank having flaps at each end forming extensions from the sides of the box. The edges of the blank may be fastened together at one part of the box by means of a fabric hinge 10.

To permit the box to collapse the vertical ends 11, 12 and the bottom end 13 and the flaps 14, 15 are scored so as to fold upon lines 16, 17 and 18. The flaps 19, 20 are also scored so as to fold upon lines 21, 22, which lines are continuations of the folds 16, 17. For a purpose to be described, flaps 19, 20 in their folded condition are bent upon lines 23, 24, that is, the double thickness of the folded flap is bent upon these lines so as to move the corners 25, 26 about said lines as an axis.

One of the bottom forming flaps 13, is shown as provided with an extending portion 27 which is secured to the other flap

13 by means of staples 28. The fold 18 on the bottom falls closely adjacent the edge of the overlapping flap 13.

With the box in collapsed condition, it may be expanded by grasping the points 25, 26 between the thumb and the finger, bending these points about the lines 22, 23 so as to permit the points 25, 26 to pass under the open folded end of the flaps 13 to the interior of the box. Pressure upon the lines 16, 17 will cause the sides 29, 30 of the box to separate and the flaps 13 will thereby be flattened with the flaps 19, 20 overlying the bottom of the box and interior thereof.

The sides and bottom of the box will then have assumed the position shown in Figure 4.

The weight of articles within the box resting upon the flaps 19, 20 will provide friction against the bottom of the box and prevent the ends 11, 12 from being pushed upwardly. The bulk of the articles within the box will prevent the sides 29, 30 from approaching each other without which action the bottom flaps 13 cannot lower.

The box is especially designed for carrying six bottles of soft drinks, and when applied to such use the box is formed of a size to snugly fit its designed contents. In such case two of the bottles will rest upon each of the flaps 19, 20 and the presence of the bottles will effectually prevent the collapse of the box by preventing approach of the sides 29, 30 toward each other.

When the box is expanded and the flaps 14, 15 have been pressed into planes, these flaps may be folded over the open end of the box, and their length is sufficient to overlap so as to completely close the upper end of the box. The flaps 31, 32 are shown as provided with holds 33, 34 by which the box and its contents may be carried.

Minor changes may be made in the physical embodiment of the invention within the scope of the appended claims without departing from its spirit.

What I claim is:

1. A collapsible box comprising a rectangular shell, an end closure joined to ends of opposite sides of said shell, end tabs forming extensions from the free sides of said shell and hinged thereto, said end closure, the free sides of said shell and said tabs each having a hinge in a common plane through the center of the box upon which

the box may collapse with outward movement of the hinges, a fold in the double thickness of said collapsed tabs about which the projecting corner may swing to permit
5 the tabs to pass to the interior of the expanded box under the hinge of the end closure.

2. A collapsible box comprising a rectangular shell, an end closure joined to ends of
10 opposed sides of said shell, an end tab forming an extension from each end of the free sides of said shell and hinged thereto, said end closure, the free sides of said shell and said tabs each having a hinge in a common
15 plane through the center of the box to per-

mit collapse of the box with outward movement of said hinges, a fold in the double thickness of the end tabs adjacent said end closure adapting the corner of the folded
tab to swing to pass to the interior of the
20 expanding box and under the hinge of said end closure and to flatten upon the interior thereof when the box is expanded, the
straightened tabs upon the remaining end
25 of the free sides adapted to close the space between the free ends of the first named
sides, and flaps projecting from the ends of said first named sides provided with finger
openings to serve as a handle for the box.

FERDINAND M. KAUFMAN.