

June 29, 1937.

O. J. TOWELL

2,085,239

CONTAINER

Filed July 10, 1935

2 Sheets-Sheet 1

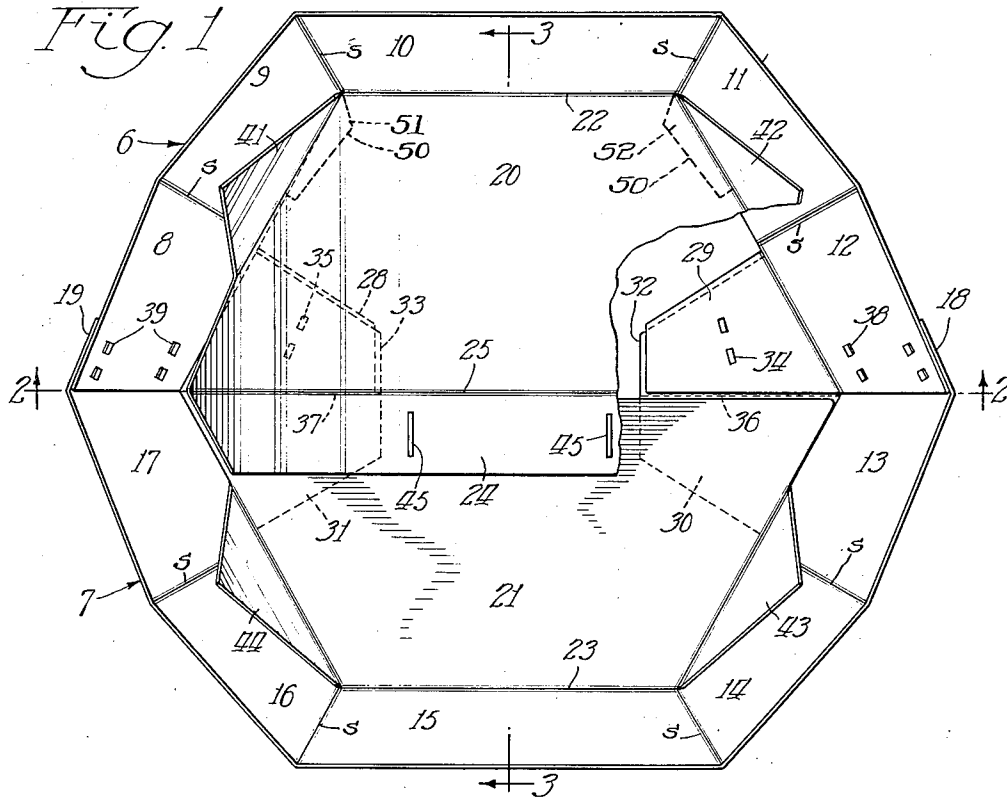
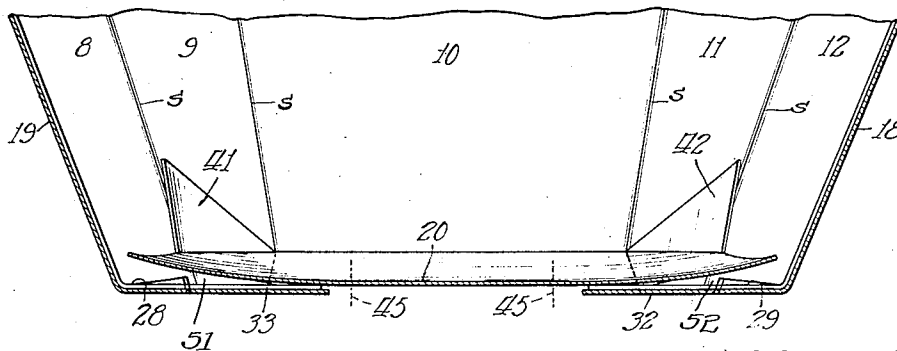


Fig. 2



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Fig. 3

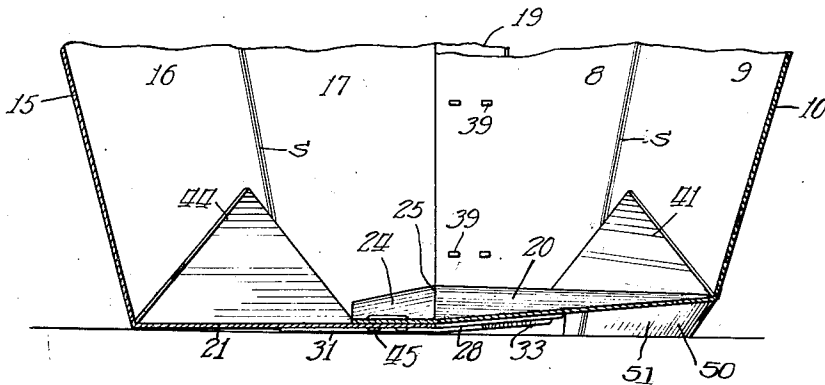


Fig. 4

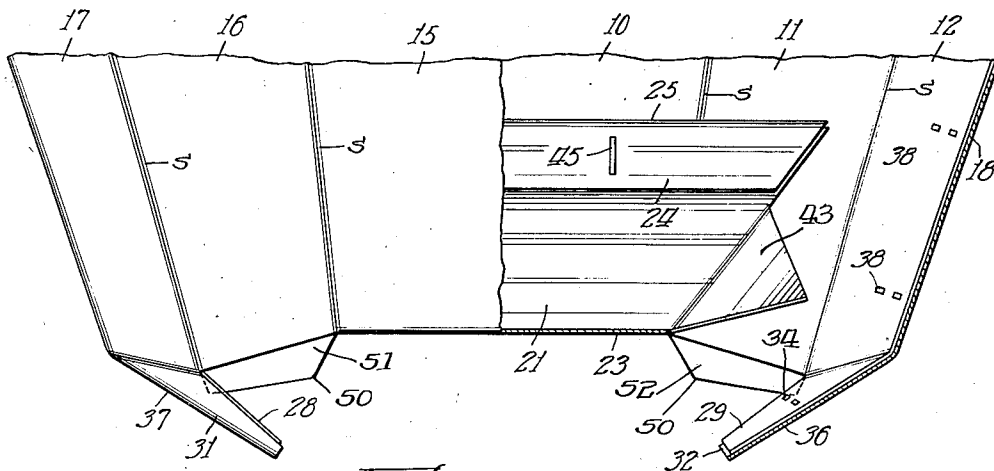
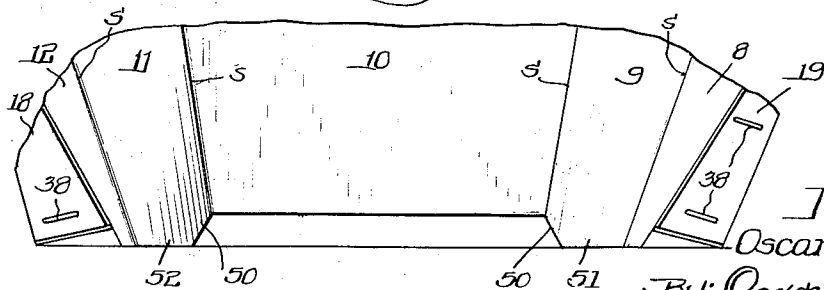


Fig. 5.



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UNITED STATES PATENT OFFICE

2,085,239

CONTAINER

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Application July 10, 1935, Serial No. 30,612

10 Claims. (Cl. 229—41)

The present invention relates to containers and more particularly to collapsible containers such as may be used for counter display purposes.

An important object of the invention is to simplify the operation of the parts whereby setting-up of the container is facilitated, whereby the container, when set up or extended, will tend to be retained in its set-up or extended condition without requiring any additional retaining or holding means other than the particular construction of the bottom portion of the container.

Another object of the invention is to provide new and novel means for attaching parts of the container together, such as by stapling or otherwise, so that the container may be readily and easily fastened together, as well as to maintain the container in proper upright position.

A further object of the invention is the provision of an extension or of legs on a part of the container so that the container will be supported by the extension or legs and maintain the container in its proper extended position and prevent the container from toppling over, particularly when the container is not full of articles.

To these and other ends the invention resides in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

The accompanying drawings illustrate a selected embodiment of the invention and the views therein are as follows:

Fig. 1 is a detail plan view of the improved container showing the container of the present invention in its set-up or extended position.

Fig. 2 is a detail sectional view on the line 2—2 of Fig. 1.

Fig. 3 is a detail sectional view on the line 3—3 of Fig. 1.

Fig. 4 is a detail front elevational view showing the container partially collapsed, parts being broken away for the sake of clearness.

Fig. 5 is a detail rear elevational view showing the attaching flaps and the extension or supporting legs.

The present embodiment of the invention provides a container of the class described, which is particularly advantageous as a counter display container for small items of merchandise such as candy bars, small packages of cheese, soap and similar small packages for which there is usually a ready sale. Due to the fact that the container can be set up by a very simple manipulation without requiring complicated instructions, the container finds favorable acceptance in the retail

trade in which the tendency of the operatives is to discard any but the most simple forms of display containers.

The particular container herein shown for the purpose of illustration comprises a rear section 6 and a front section 7, each of said sections being divided by means of score lines S into a plurality of hingedly connected side wall sections. The section 6 comprises the side wall sections 8, 9, 10, 11, and 12, and the section 7 comprises the side wall sections 13, 14, 15, 16, and 17.

Attaching flaps 18 and 19, Fig. 1, are formed on the respective side wall sections 13 and 17, and serve as the means of joining the container sections 6 and 7 together. While these flaps are shown as being located on the container section 7, it is obvious that they could be located on the section 6 to equal advantage.

The bottom of the container may be formed of two separate parts or portions 20 and 21, which are preferably, but not necessarily, integral with the respective container sections 6 and 7 and are hinged to said sections by means of score lines 22 and 23.

One of the bottom portions, being in the present instance, the bottom portion 20, has an extended portion or flap 24 thereon which is hinged to the portion 20, along the score line 25 which is located, in the completed form of the container, so as to be substantially midway between the score lines or hinge lines 22 and 23. This score line 25 thus forms the central hinge line of the bottom along which the bottom may bend upwardly when the container is collapsed.

Means are provided for limiting downward movement of the bottom portion beyond a substantially flat condition. In the present instance this means comprises flap extensions 28 and 29 at opposite sides of the container and forming extensions on the respective wall sections 8 and 12. The wall sections 13 and 17 also have flap extensions thereon indicated at 30 and 31 respectively. The extensions 30 and 31 have lateral tabs or flaps thereon indicated respectively at 32 and 33. These laterally extending flaps 32 and 33 are suitably joined to the respective flaps 28 and 29 as by means of staples 34 and 35. Score lines 36 and 37 separate the respective sets of tabs 30, 32 and 31, 33. These score lines are impressed so as to be disposed substantially in line with the hinge line 25 of the bottom when the container is in set-up or extended condition. Securing means, herein shown as series of staples 38 and 39 connect the attaching flaps 18 and 19 to the respective wall sections 12 and 8.

The bottom portions 20 and 21 are preferably formed so that their edges will approximately conform to the contour of the lower edges of the side walls when the container is in set-up condition. In order to prevent an opening or crack from appearing between the edges of the bottom portions and the wall sections 9, 11, 14, and 16, there are provided small flap extensions 41, 42, 43, and 44 located on the bottom portions adjacent the respective side wall sections 9, 11, 14, and 16, the flap extensions 41 and 42 being located on the bottom portion 20, and the flap extensions 43 and 44 being located on the bottom portion 21. All of the flaps 41, 42, 43 and 44 are preferably formed integral with the bottom portions and are defined therefrom by score lines as indicated.

While the contour of the bottom portions has been described as approximately conforming to the contour of the lower edges of the side wall sections in the set-up condition of the container, the bottom portion 20, including the flap extensions 41 and 42, is preferably made of such form as to somewhat frictionally engage the respective pairs of side walls, sections 8-9 and 11-12, so that the lateral edges of the bottom portion 20 will be somewhat bowed or bent upwardly when the bottom is in its final position when the container is set up. While the frictional engagement may be obtained due to the pressure of flap extensions 41 and 42 alone on the adjacent side walls, in the present instance the bottom portion 20 is itself preferably made of such a size that its lateral edges will frictionally engage against the adjacent side walls just above their lower edges. The line of frictional contact between the bottom portion 20 and adjacent side wall section is preferably, although not necessarily limited in extent to the length of the base of the respective tab extensions 41 and 42, which in the present instance extend entirely along the bases of sections 9 and 11 and extend partially along the respective sections 8 and 12. The bottom portion 21 is preferably made so as to fit well within the contour of the lower edges of the respective pairs of wall sections 13-14 and 16-17 so that there is no appreciable frictional contact between the edges of bottom portion 21 and the adjacent side wall sections.

The bottom sections are secured together by securing means connecting the flap extensions 24 to the bottom portion 21. This securing means comprises, in the present instance, staples 45, 45 which positively join the flap 24 and the bottom portion 21 along a central area preferably approximating one-third of the overlapping parts of bottom portion 21 and flap 24.

Due to this arrangement of the securing means 45, 45 approximately the outer one-third of the length of the flaps 24 at each end thereof will be unsecured to the bottom portion 21 thus permitting the free outer ends of the flap 24 and the adjacent parts of the bottom portion 20 to bow upwardly somewhat away from the adjacent parts of the bottom section 21 so that the latter, when the bottom is in lower position, will be somewhat less bent than the bottom portion 20. By this arrangement the hinge line or score line 25 will be bowed downward to such an extent as to render it inoperative as a hinge and this will cause the bottom to remain in its fully expanded or substantially flattened condition until a definite pressure is exerted on the under surface of the bottom sufficient to return the hinge line or score line 25 to a straightened condition, whereupon the bottom will tend to fold upwardly to a collapsed condition. In other words, the bottom portions

20-21, when pushed down, will act together simply as interhinged members until the hinge line 25 reaches a position in which it is approximately in the plane of the score lines 22 and 23. At or before this condition is reached the outer edges of the bottom portions 20 come into frictional engagement with their adjacent side wall sections and consequently initiate the downward bending of the hinge line 25. Immediately upon the beginning of the hinge line to bend, the central portion of the bottom will snap down beyond what may be termed a "dead center" so that the bottom would tend to bend down still farther if it were not for the presence of the bottom retaining members formed by flaps 29, 30, 32 and flaps 28, 31 and 33 previously described.

Due to the flexibility of the material from which the container is made, the bottom tends to assume a somewhat rounded condition causing the expanded container to rock or wobble. Also, when a scored foldable extension is formed on the rear section 6 the empty container has a tendency to fall or topple over. Therefore, means are provided to overcome the rocking of the container because of its somewhat rounded bottom and the toppling of the container because of an extension advertising display card. This means comprises an integral extension 50 in the form of extending legs 51 and 52 formed on the rear section 6. These legs 51 and 52 are preferably formed on the rear of the container and are herein shown on the portions 9 and 11, respectively, of section 6 on each side of the central rear portion 10, Fig. 5. The extension 50 comprising the integral legs 51 and 52 extend or project a predetermined distance below the normal bottom edges or ends of the wall sections. Thus the container may be said to tilt slightly forward, and the container will be supported by the legs 51 and 52 and the normal bottom. These legs always keep the container in its proper upright position and prevent the container from rocking or toppling even when empty.

This application discloses a modified form of the invention which is disclosed in applicant's co-pending application, Serial No. 746,277, filed October 1, 1934.

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 restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

The invention is hereby claimed as follows:

1. A collapsible container having inter-connected inclined side walls, a bottom for the container comprising two portions each hingedly connected to opposite side walls at the lower edges of the side walls, each portion of said bottom extending substantially to the center line of the container, one of said bottom portions having an integral scored flap thereon which overlaps the free end of the first bottom portion, the said score line being substantially coextensive with the said free end, and means for connecting said flap on one portion to the other portion, said connection being restricted to central part of the bottom sections, thus leaving the lateral extremities of the connected bottom portions free to become somewhat separated.

2. A collapsible container having inter-connected inclined side walls, a bottom for the container comprising two portions, each hingedly

connected to opposite side walls at their lower edges, one portion of the bottom being adapted to frictionally engage the adjacent side walls somewhat above their lower edges, the other bottom portion being so shaped as to fit within the contour of its adjacent side walls without appreciable frictional contact therewith and said last mentioned bottom portion extending substantially to the center line of the container, the first mentioned bottom portion having a flap at its free edge extending beyond and overlapping the free edge of the other bottom portion, said flap being defined from its attached bottom portion by a hinge line, means for connecting said flap and the opposite bottom portion along an area restricted to the central part of the bottom portions, thus leaving the lateral extremities of the connected bottom portions free to become somewhat separated, whereby when the first mentioned bottom portion is bowed downwardly along the hinge line due to frictional engagement of said bottom portion with the side walls, the hinge line will become inoperative as a hinge and retain the bottom portions in expanded condition, and means associated with the side walls for limiting the downward movement of the last mentioned bottom portion.

3. A collapsible display container comprising a plurality of hingedly connected sides, a bottom attached to at least two of said sides, said bottom comprising a plurality of hingedly connected sections, one section being of such size that free edges thereof frictionally engage the adjacent sides just above their lower edges, the other section being of a smaller size and contacting the sides at their lower edges, whereby the section of larger size will be bowed downwardly to prevent collapsing of the bottom, and a pair of integral extensions formed on a part of the container and extending a predetermined distance below the bottom edges of the said sides to assist in supporting the container when in extended position and prevent the container from rocking on its bottom and from tending to topple over when empty.

4. A collapsible display container comprising a plurality of hingedly connected side walls, a bottom attached to opposite side walls and having a hinge line to permit folding of the bottom, and a pair of legs extending from two adjacent corners below the normal bottom edges of the side walls whereby the container when expanded will be supported by the bottom and by said legs.

5. A collapsible container having inter-connected inclined side walls, a bottom for the container comprising two portions each hingedly connected to opposite side walls at the lower edges of the side walls, each portion of said bottom extending substantially to the center line of the container, one of said bottom portions having an integral scored flap thereon which overlaps the free end of the first bottom portion, the said score line being substantially coextensive with the said free end, means for connecting said flap on one portion to the other portion, said connection being restricted to central part of the bottom sections, thus leaving the lateral extremities of the connected bottom portions free to become somewhat separated, and a pair of legs extending from two adjacent corners below the normal bottom edges of the side walls whereby the container, when expanded, will be supported by one of the bottom portions and the legs.

6. A collapsible display container comprising a plurality of hingedly connected sides, a bottom having a plurality of hingedly connected extensions, one section being of such size that the free edges thereof frictionally engage the adjacent sides just above their lower edges, the other section being of a smaller size and contacting the sides at their lower edges, whereby the section of larger size will be bowed downwardly to prevent collapsing of the bottom, and a pair of integral extensions formed on opposed edges of contiguous corners of the container and extending a predetermined distance below the bottom edges of said sides to assist in supporting the container when in extended position and prevent the container from rocking on its bottom and from tending to topple over when empty.

7. A collapsible display container comprising a plurality of hingedly connected sides and a bottom having a hinge line to permit the container to be folded between the front and rear sides of the container when the container is collapsed, said bottom forming a downwardly extending dihedral angle when the container is in extended position, and a pair of integral extensions formed on the opposed edges of contiguous corners of the container and extending downwardly to a point lying in the plane of one side of the dihedral angle formed by the bottom when the container is in extended position whereby the container will be supported by that portion of the bottom and by said extensions.

8. A collapsible display container comprising a plurality of hingedly connected sides and a bottom hingedly connected to at least two of said sides, said bottom comprising a plurality of hingedly connected sections, one section being of such size that free edges thereof frictionally engage the adjacent sides adjacent their lower edges, the other section being of a smaller size and contacting the sides at their lower edges whereby the section of larger size will be bowed downwardly to prevent collapsing of the bottom.

9. A collapsible display container comprising a plurality of hingedly connected sides and a bottom hingedly connected to at least two of said sides, said bottom comprising a plurality of hingedly connected sections, one section being of such size that free edges thereof frictionally engage the adjacent sides adjacent their lower edges, the other section being of a smaller size and contacting the sides at their lower edges whereby the section of larger size will be bowed downwardly to prevent collapsing of the bottom, and extensions hingedly connected to the sides to overlie the free edges of the bottom sections to prevent an opening or crack appearing between the edges of the bottom sections and the sides.

10. A collapsible display container comprising a plurality of hingedly connected sides and a bottom hingedly connected to at least two of said sides, said bottom comprising a plurality of hingedly connected sections, one section being of such size that free edges thereof frictionally engage the adjacent sides adjacent their lower edges, the other section being of a smaller size and contacting the sides at their lower edges whereby the section of larger size will be bowed downwardly to prevent collapsing of the bottom, and means to limit the downward movement of the bottom sections.

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