Aug. 17, 1937. J. HEKMAN 2,090,200

CONTAINER

Filed March 24, 1936 2 Sheets-Sheet 1

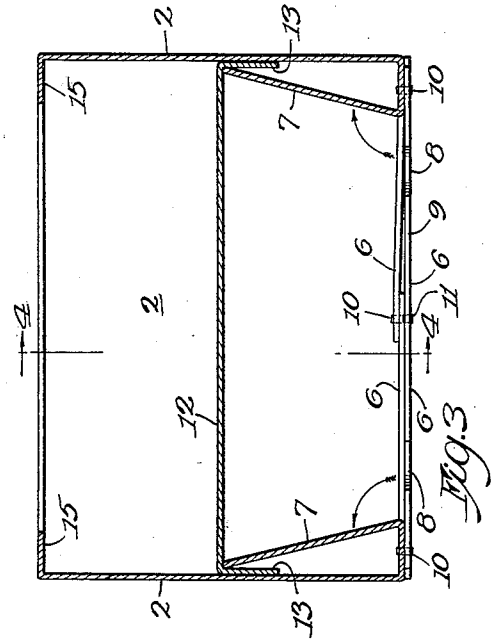


Fig. 3

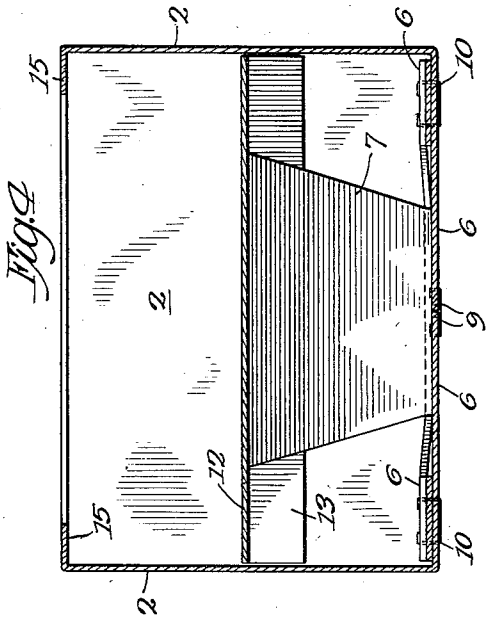


Fig. 4

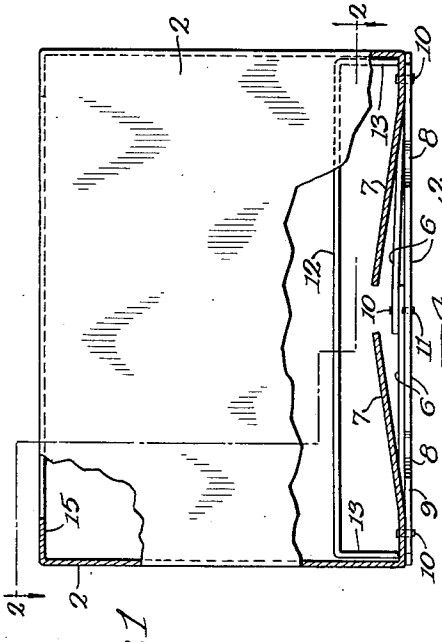


Fig. 1

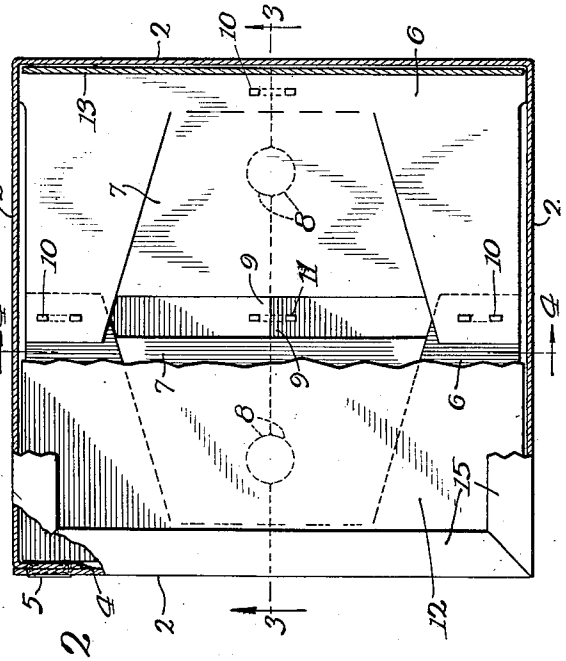


Fig. 2

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Aug. 17, 1937. J. HEKMAN 2,090,200

CONTAINER

Filed March 24, 1936 2 Sheets-Sheet 2

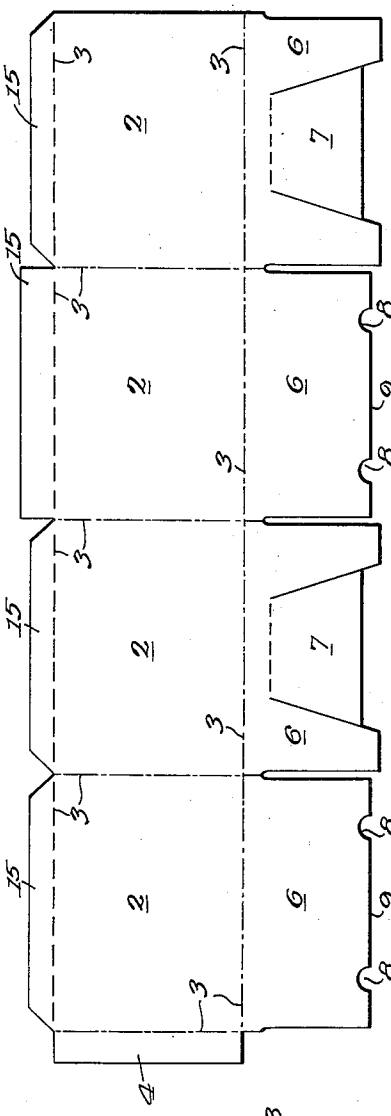


Fig. 6

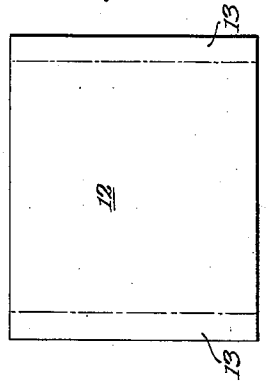


Fig. 7

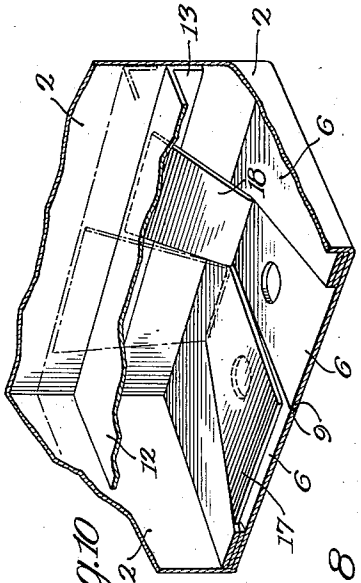


Fig. 10

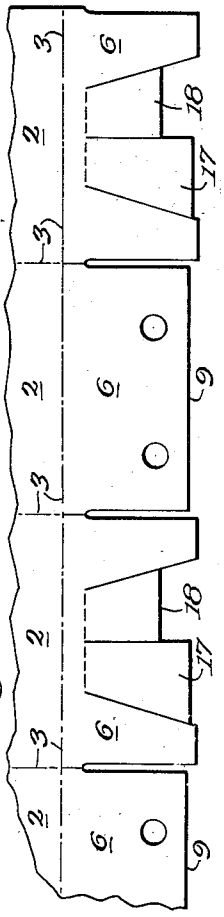


Fig. 8

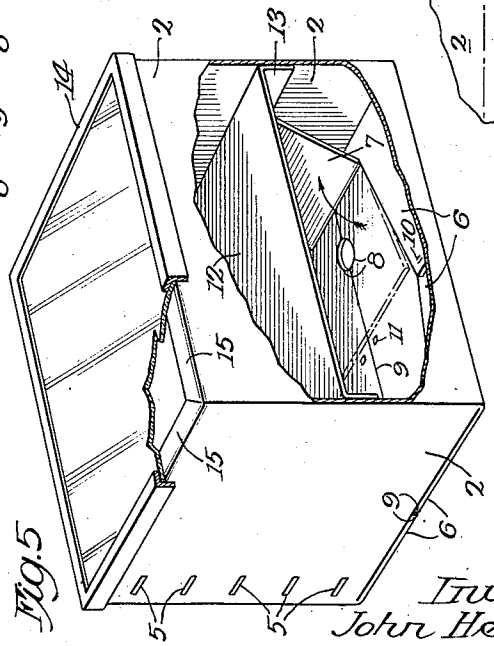


Fig. 5

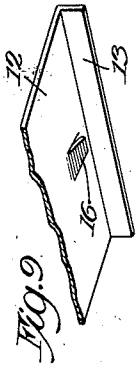


Fig. 9

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UNITED STATES PATENT OFFICE

2,090,200

CONTAINER

John Hekman, Grand Rapids, Mich., assignor to Chicago Carton Company, Chicago, Ill., a corporation of Illinois

Application March 24, 1936, Serial No. 70,562

10 Claims. (Cl. 206—44)

My invention relates generally to containers and particularly to containers of the type which are made of paper board and are used for packaging and displaying goods which are sold in small lots, as by the pound.

Large numbers of containers of this type are employed in the marketing of crackers or cookies or the like, and for this use it is very desirable that the level of the crackers or cookies or other products contained within the container shall not drop an unreasonable distance below the top of the container as the goods are sold. The reasons for this requirement are twofold: If the level of the goods drop too far from the top, it is difficult to remove the goods from the container and in addition, it is difficult if not practically impossible, to effect a satisfactory display of such goods as remain in the container. Hence, the principal object of the present invention is to provide a container of the above described type which shall include means for maintaining the goods contained therein at a reasonably high level at all times during the use thereof, despite normal withdrawals.

Other objects of the invention are to provide a container of this type which may be cheaply and conveniently manufactured from a single, suitably cut, flat sheet of paper board or the like, and to provide a container of the above described type which shall be convenient to use and substantially fool-proof in its operation.

Other objects and advantages of the invention will be made apparent by reference to the following description of certain preferred embodiments thereof taken in conjunction with the accompanying drawings, wherein—

Fig. 1 is a side elevational view, partially broken away and in section, of a container embodying the features of my invention.

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

Figs. 3 and 4 are sectional views taken, respectively, on the lines 3—3 and 4—4 of Fig. 2, the section of Fig. 4 being also indicated by the line 4—4 of Fig. 3.

Fig. 5 is a perspective view of the container illustrated in Figs. 1 through 4.

Fig. 6 is a developed view of the cut sheet of material which is folded to form the container illustrated in Figs. 1 through 4.

Fig. 7 is a developed view of the false bottom used in conjunction with the container illustrated in Figs. 1 through 5.

Fig. 8 is a fragmentary, developed view of a modification of the container illustrated in the other figures in the drawings.

Fig. 9 is a fragmentary, perspective view, illustrating a modified form of false bottom for use with the container of my invention.

Fig. 10 is a fragmentary, perspective view showing certain of the features of a modified form of container.

As shown in the drawings, the container comprises a rectangular box-like body structure having a permanently closed bottom and an open top, and it is preferably formed from a single, suitably cut sheet of stiff paper board or similar material having the general outline illustrated in Fig. 6. This sheet includes four aligned, substantially rectangular portions 2, the outlines of which are defined by suitable fold or score lines indicated at 3, and these portions 2 are adapted to be folded into a tubular shape to provide side walls for the container. A suitable, vertically extending flap 4 is provided for permitting the engaging vertical edges of the two adjacent side portions of the sheet to be fastened together, as by the metallic staples indicated at 5.

The bottom of the container is formed by bending in four, downwardly extending flaps 6, one of which is formed integrally with each of the side wall portions 2. Two of these flaps 6 are provided with secondary flaps 7 formed therein. The surface of each of the other two flaps is uncut, except for the semi-circular openings 8, the purpose of which will be subsequently set forth, and the dimensions of the two flaps are such that the outer edges 9 thereof abut against each other in the completed container. During the assembly of the container, the flaps 6 which are provided with the secondary flaps 7 are first bent into the position shown in Figs. 1, 2, and 5. Next, the uncut flaps 6 are bent so that the outer edges 9 thereof are in abutting engagement, as is likewise shown in Figs. 1, 2, and 5. All four of the flaps are then stitched together by suitable means, such as metallic staples, at suitable points such as indicated at 10, and the two bottom flaps are likewise stitched to each other adjacent their meeting edges as at 11. It will be seen that the uncut or lowermost flaps 6 provide a continuous, permanent bottom for the container which is reinforced around the edges thereof by the side portion of the inner flaps 6 which have the secondary flaps formed therein.

During the use of the container, a false bottom 12 which is formed of a single, rectangular sheet of stiff suitable paper board or the like, having the outline shown in Fig. 7, is disposed within the

container adjacent the permanent bottom formed by the flaps 6. The central portion of the false bottom 12 is raised a slight distance from the permanent bottom by two suitable flaps or flanges 13, integral therewith. The secondary flaps 7 normally lie substantially horizontal within the space between the false bottom and the permanent bottom (the secondary flaps are shown in a slightly raised position in Fig. 1 in order to clarify the drawings) and are bendable upwardly to raise the false bottom 12 from the positions shown in Figs. 1 and 2 to the position shown in Figs. 3, 4, and 5. A suitable crease or score line is provided in the innermost flaps 6 as shown in Fig. 6, to facilitate said upward bending of the secondary flaps 7. The top of the container is ordinarily closed by a removable glass cover 14, as is shown in Fig. 5.

In order that the secondary flaps 7 may be moved from the normal position thereof to raise and operatively support the false bottom in the positions shown in Figs. 3, 4, and 5, the lowermost flaps are provided with suitable cut-out portions 8, as mentioned above, which form finger holes in the completed container. These holes make possible the convenient actuation of the secondary flaps 7 from outside the container.

In the container illustrated in the drawings, the secondary flaps 7 for raising and supporting the false bottom are of equal length, and hence serve to support the false bottom 12 when raised in a plane substantially parallel to, but elevated a predetermined distance from, the initial lower position of the false bottom. It is, of course, within the province of my invention that these secondary supporting flaps may be made of differing lengths should it be desirable for any reason to raise the false bottom unevenly.

Each of the side portions 2 is also provided with a narrow flap 15 at the upper end thereof. When the container is in use these flaps may be bent in, and as particularly shown in Fig. 5, in order to stiffen the top of the container and to aid in supporting the glass cover 14 used in conjunction therewith.

It will be noted that the secondary supporting flaps 7, when they have been moved outwardly to raise and support the false bottom 12, are biased to a stable supporting position, as is shown in Figs. 3 and 5, by the weight of the contents of the container. In certain applications, it may be desirable, however, to provide additional means for latching or otherwise retaining these flaps 7 in a raised position. One means for accomplishing this may comprise suitable flap detents 16 pressed out of the false bottom itself, as is shown in Fig. 9. Also, for certain applications it may be desirable that the false bottom 12 be raised in a plurality of steps. This may be conveniently accomplished by providing a plurality of secondary flaps 17 and 18 of different lengths in place of the two single flaps 7, as illustrated in Figs. 8 and 10. In order to better support the false bottom, it is desirable that each cooperating pair of these secondary flaps 17 and 18 shall be disposed on opposite sides of the center line of the bottom of the container, this arrangement making for a structure of maximum strength and rigidity. If desired, the unequal length flaps 17 and 18 may be used for raising and supporting the false bottom in a plane which is inclined to the plane of the permanent bottom.

From the foregoing it will be seen that I have provided an improved container for loose goods or the like, which includes means for maintaining the level of the goods contained therein within a short distance of the top of the container, even after substantial quantities of the goods have been removed from the container. This arrangement greatly facilitates the use of containers of this type, and also makes possible a much more advantageous display of the goods which are contained therein. In addition, I have disclosed how this improved container may be conveniently and inexpensively manufactured from flat, sheet paper board or the like.

My improved container is extremely simple in design; the means for raising the false bottom is substantially fool-proof in operation and may be readily actuated from without the container. I have also disclosed means whereby the raising of the false bottom of the container during use may be effected in a plurality of steps, and means whereby the secondary flaps which serve to raise the false bottom may be latched into place so as to assure the maintaining of the false bottom in the raised position during use.

Various modifications may be made in the described structures without departing from the principles of my invention, and for this reason, it is my desire that the accompanying claims shall be accorded the broadest reasonable construction consistent with the state of the art.

I claim the following as my invention:

1. A container of the class described comprising side walls joined to form a tubular body, a closure for the lower end of said body, a bottom vertically adjustably disposed within said body, and flap means extending inwardly from the sides of said body above said closure and adapted to be bent upwardly to engage and move said bottom upwardly within said body.

2. A container of the class described comprising side walls joined to form a tubular body, a closure for the lower end of said body, a bottom vertically adjustably disposed within said body, and flap means extending inwardly from the sides of said body above said closure and adapted to be bent upwardly to engage and move said bottom upwardly within said body, said closure being provided with access openings for facilitating manual bending of the flaps.

3. A container of the class described comprising side walls joined to form a tubular body, a closure for the lower end of said body, a bottom vertically adjustably disposed within said body, and flap means extending inwardly from the sides of said body above said closure and adapted to be bent upwardly to engage and move said bottom upwardly within said body, said flaps being bendable to an overcenter position for supporting the bottom in an upwardly adjusted position and wherein the bottom is operative to resist the restoration of said flaps to the initial unbent position thereof.

4. In a container of the class described, the combination of side walls forming a tubular body of polygonal cross section, bottom-forming flaps extending from the lower ends of said side walls, at least some of said flaps being bent inwardly and fastened together to form a permanent bottom for said container, and a false bottom normally positioned within said container adjacent said permanent bottom, some of said flaps having secondary flap portions formed therein for raising and operatively supporting said false bottom at a substantially higher position than the said normal position thereof.

5. In a container of the class described, the

combination of side walls forming a tubular body of substantially rectangular cross-section, bottom-forming flaps extending from the lower ends of said side walls, at least some of said flaps being bent inwardly and fastened together to form a permanent, flat bottom for said container, and a flat, false bottom, substantially rectangular in outline, which is normally positioned within said container adjacent and substantially parallel to said permanent bottom, at least some of said flaps having secondary flap portions formed therein for raising and operatively supporting said false bottom in a plane substantially parallel to said permanent bottom but removed a considerable distance therefrom.

6. In a container of the class described, the combination of side walls forming a tubular body of substantially rectangular cross-section, bottom-forming flaps extending from the lower ends of said side walls, said flaps being bent inwardly and fastened together to form a permanent, flat bottom for said container and at least some of said flaps including secondary flap portions, and a false bottom which is substantially rectangular in outline and which is normally disposed within said container adjacent said permanent bottom, said secondary flap portions being normally positioned intermediate said permanent bottom and said false bottom, and said permanent bottom having finger holes formed therein, whereby said secondary flaps may be bent outwardly to raise and operatively support said false bottom some distance from the normal position thereof.

7. In a container of the class described, the combination of side walls forming a tubular body of substantially rectangular cross section, bottom-forming flaps extending from the lower ends of said side walls, at least some of said flaps being bent inwardly and fastened together to form a permanent, substantially flat bottom for said container and a false bottom, adjacent and substantially parallel to said permanent bottom, which comprises a substantially flat sheet of suitable material having a plurality of dependent side portions which normally support said false bottom adjacent said permanent bottom, at least some of said flaps having secondary flap portions formed therein for raising and operatively supporting said false bottom in a plane substantially parallel to said permanent bottom but removed a considerable distance therefrom, said secondary flaps being actuable to raise and support said false bottom from without said container.

8. In a container of the class described, the combination of side walls forming a tubular body of generally rectangular cross section, bottom-forming flaps extending from the lower ends of said side walls, at least some of said flaps being bent inwardly and fastened together to form a permanent bottom for said container, and a false bottom comprising a generally rectangular, substantially flat sheet of suitable material having dependent side portions which normally support said false bottom within said container in a plane generally parallel to, but spaced a short distance from, said permanent bottom, at least some of said flaps having secondary flap portions formed therein, which secondary flap portions are normally disposed in the space between said permanent bottom and said false bottom and are bendable outwardly to raise and operatively support said false bottom in a plane substantially parallel to the normal plane thereof but removed a considerable distance therefrom, said secondary flaps being actuable to raise and support said false bottom through finger holes formed in said permanent bottom.

9. In a container of the class described, the combination of side walls forming a tubular body of generally rectangular cross-section, bottom-forming flaps extending from the lower ends of said side walls, at least some of said flaps being bent inwardly and fastened together to form a permanent bottom for said container, and a false bottom comprising a generally rectangular, substantially flat sheet of suitable material having depending side portions which normally support said false bottom within said container in a plane generally parallel to, but spaced a short distance from said permanent bottom, and means comprising bendable secondary flaps formed from opposed bottom-forming flaps of different lengths which are disposed intermediate said permanent bottom and said false bottom for raising and selectively supporting said false bottom at different heights, each of which is some distance above the normal position thereof, said permanent bottom having finger holes formed therein for permitting the operation of said flaps from without said container.

10. In a container of the class described, side walls, a permanent bottom cooperatively affixed to said side walls and having finger holes formed therein, a false bottom normally disposed within said container adjacent said permanent bottom, means comprising bendable flaps, which are disposed intermediate said permanent bottom and said false bottom and which are bendable through said finger holes, for raising and operatively supporting said false bottom at a position some distance above the normal position thereof, and detents pressed out of said false bottom for automatically latching said flaps in position when they are bent to raise and support said false bottom.

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