Jan. 17, 1933. H. A. INMAN 1,894,402

EGG CONTAINER

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Fig. 1

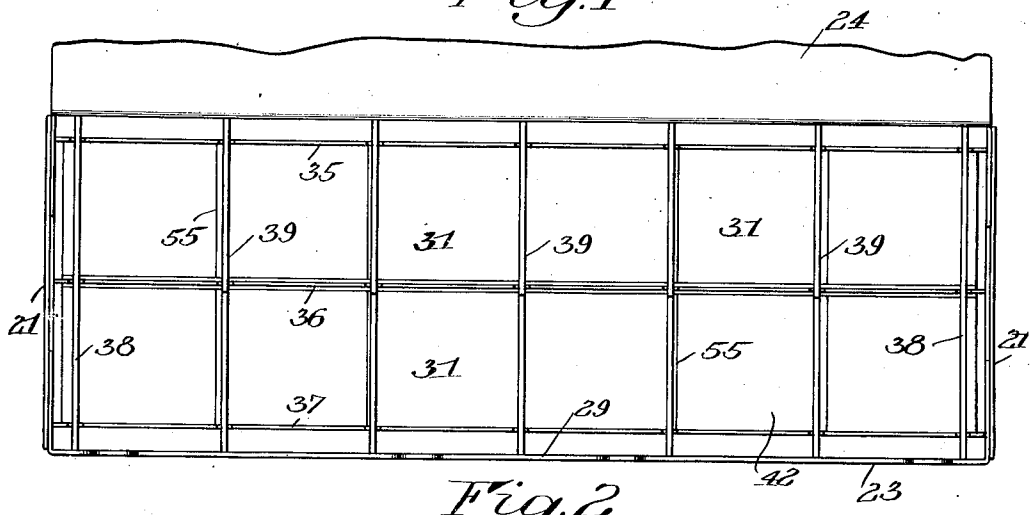


Fig. 2

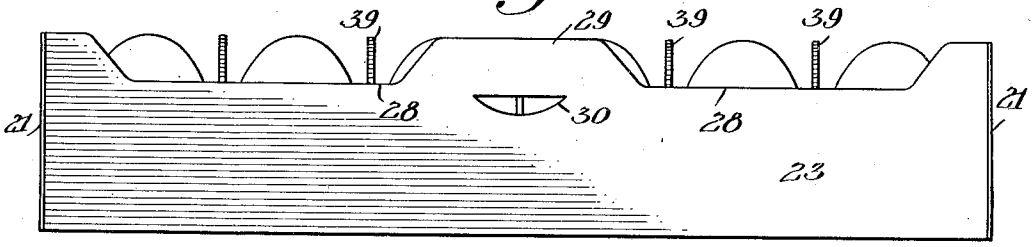


Fig. 3

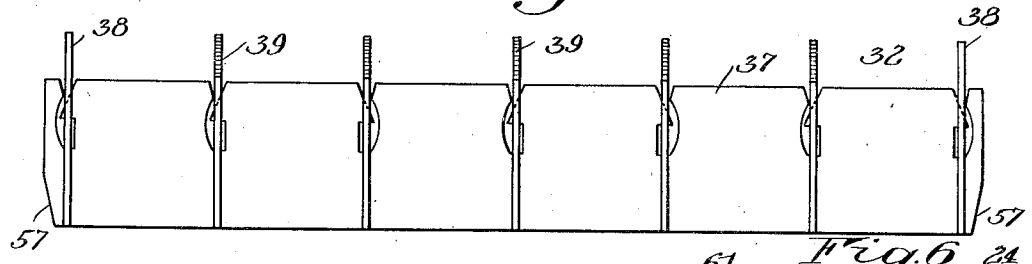


Fig. 4

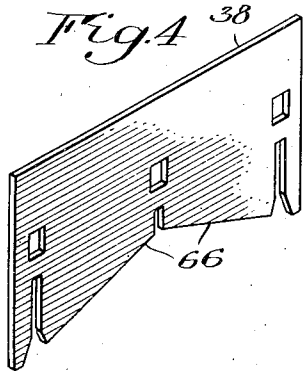


Fig. 5

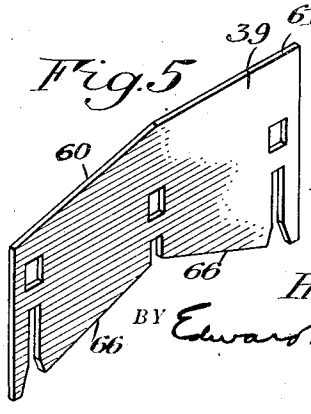
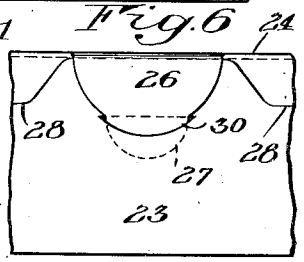


Fig. 6



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EGG CONTAINER

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Fig. 7

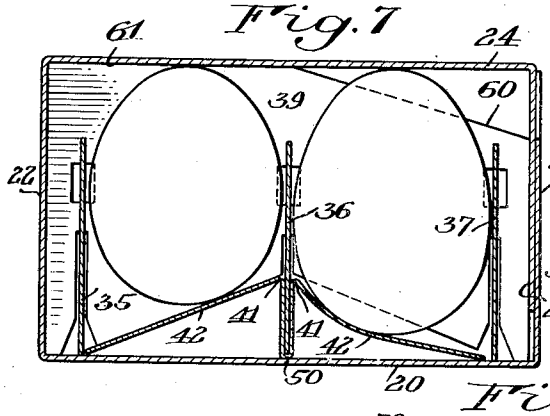


Fig. 8

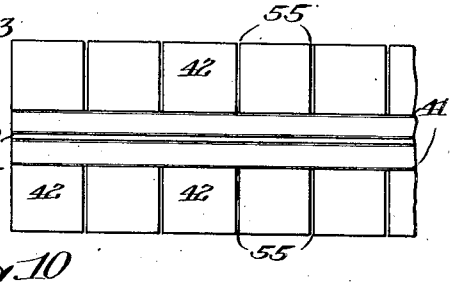


Fig. 10

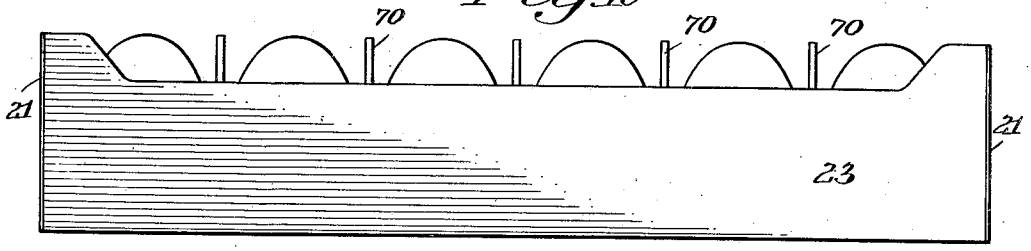


Fig. 11

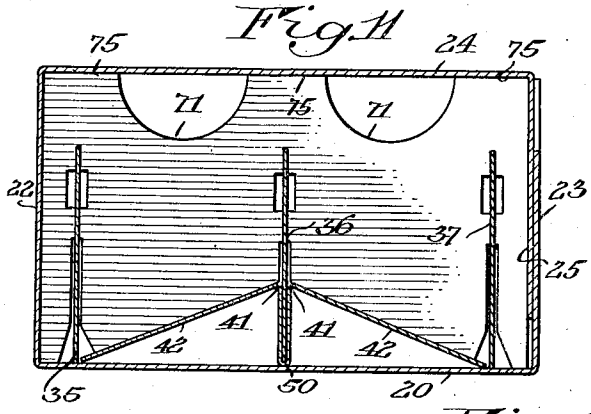


Fig. 12

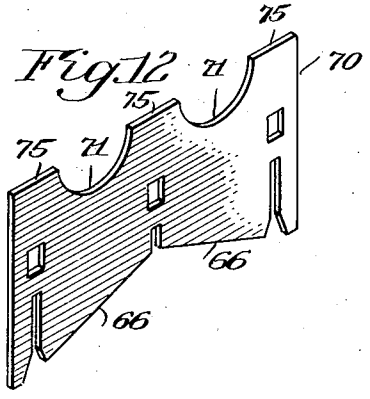
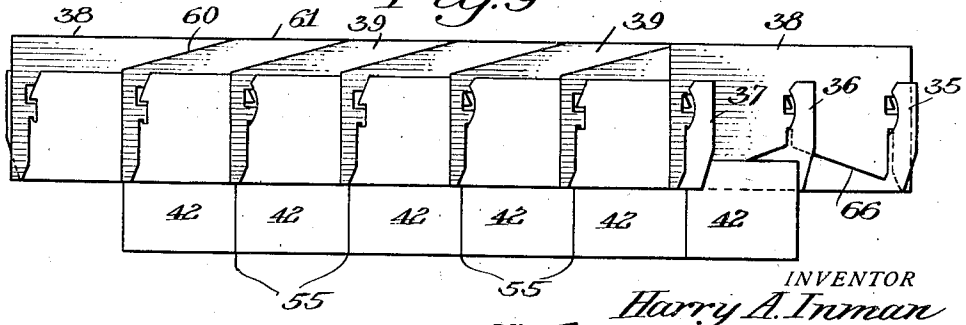


Fig. 9



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Patented Jan. 17, 1933 1,894,402

UNITED STATES PATENT OFFICE

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EGG CONTAINER

Application filed April 28, 1931. Serial No. 533,496.

This invention relates to containers and more particularly to those used for fragile articles such as eggs, or the like. One of the objects of the invention is the provision of a container which is stronger and more durable than previous containers of this class.

Another object is the provision of a resilient cushioning member which protects the eggs against breakage during packing and shipping.

Still another object of the invention is the provision of a container so formed that eggs of different sizes will be positioned with their tops at substantially the same height.

A further object is the provision of a cushioning member which is attached to the partition structure and is removable and collapsible therewith.

A still further object is the provision of a box which cooperates with complementary parts of the partition structure to provide a suitable display container.

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.

In the drawings:

Fig. 1 is a plan view of a container constructed in accordance with the preferred embodiment of the invention showing the cover in open position and partly broken away;

Fig. 2 is a front elevation of the container illustrated in Fig. 1, showing the display feature which is incorporated in the container;

Fig. 3 is an elevation of a partition structure or filler constructed in accordance with the preferred embodiment of the invention;

Fig. 4 is a perspective view of one of the end transverse members of the filler;

Fig. 5 is a perspective view of the preferred form of one of the intermediate transverse members of the filler;

Fig. 6 is a fragmentary view of a portion of the box showing the method of supporting and securing the cover in closed position;

Fig. 7 is a vertical sectional view taken transversely of the filled container showing the cover in closed position;

Fig. 8 is a portion of the cushioning member before being applied to the partition member, showing the relation to the various parts thereof;

Fig. 9 is a perspective view of the preferred filler and cushioning members in the collapsed position;

Fig. 10 is a plan view of a modified form of container;

Fig. 11 is a vertical sectional view taken transversely of the container illustrated in Fig. 10, showing the cover in closed position, and

Fig. 12 is a perspective view of an intermediate transverse member of the form used in the modified construction shown in Figs. 10 and 11.

Similar reference numerals throughout the several views indicate the same parts.

Referring to Figs. 1, 2, and 7, the preferred form of the new and improved container comprises a body or box portion having a bottom 20, ends 21, back 22, front 23 and a cover 24. All parts are preferably made from a single sheet of cardboard which is scored, folded, and pasted in the usual manner. The cover is provided with a flap 25 and a tab 26 (Fig. 6) having a tongue 27. The front 23 is recessed or cut low for a considerable portion of its length, as indicated at 28, so that articles within the container may be more readily inspected and examined, and has near its center an upwardly extending tab 29 intermediate the recesses 28, and a slot 30, the purposes of which will hereafter appear.

The space within the box is divided into a plurality of article receiving compartments 31 by a suitable collapsible partition structure or filler generally indicated by the number 32. This filler comprises longitudinal partition members 35, 36, and 37, end transverse members 38 and a plurality of intermediate transverse members 39. The longitudinal and transverse members are spaced so that the compartments 31 are of sufficient size to receive a single article such as an egg. These members are also provided with the

usual interengaging slots which act like hinged joints and permit the filler to be collapsed in the usual and well known manner. The filler 32 is removable from the box portion, and is collapsible to facilitate storing and shipping, as shown in Fig. 9.

The filler 32 has secured thereto adjacent the bottom thereof a suitable cushioning member which preferably extends the full length of the box, and which is disposed at the bottom of the compartments 31. This cushioning member provides somewhat resilient or flexible bottoms on which the eggs may rest when in the compartments 31, which bottoms effectively protect the eggs against breakage during packing or shipping, and eliminate the use of the usual protective pads which are placed beneath the box. This cushioning member preferably comprises a piece or pieces of cardboard held at one side of each compartment in elevated position as at 41 and sloping thence downwardly as at 42 to rest on the bottom 20 near the other side of the compartment.

These cushioning members may be separable from the filler, but it is ordinarily desirable to secure them permanently to the filler so that they may be handled as a unit therewith and may be placed in a box automatically whenever a filler is placed therein. To this end, the cushioning members for the two rows of compartments or cells 31 are preferably made from a single piece of cardboard or the like, suitably scored along the lines 41 and 50, as indicated in Fig. 8, to fit around the bottom edge and extend part way up the sides of the central longitudinal partition 36, as shown in Fig. 7, being secured to the member 36 in any suitable way as by adhesive or cement. Thus the cushioning members become a unit with the filler and are removable or insertable therewith. When the filler is collapsed, the inclined members 42 bend downwardly at the hinge-like joints 41 and fold substantially into the plane of the collapsed filler, as shown in Fig. 9.

In order to provide a pleasing display feature, in a container of this class, it is desirable to have the tops of all the eggs in the container at substantially a uniform elevation, even though the eggs may be of different sizes. The present invention accomplishes this desirable result by providing a cushioning member which automatically adjusts itself for different sizes of eggs, and enables the tops of all the eggs to extend to substantially the same height, thus presenting a pleasing uniformity in appearance.

To this end, the inclined members 42 are provided with a plurality of transverse slits 55 which extend substantially the full width of the inclined portions 42 and are substantially in the planes of the various intermediate transverse members 39. The slitting of the members 42 subdivides the cushioning members into separate and independent resilient bottoms for each of the various compartments 31, enabling each bottom to deflect independently of any of the other bottoms. Furthermore, the cardboard or other material of which the members 42 are made is so chosen as to thickness and strength that it will barely support a relatively small egg with little or substantially no deflection, but when a larger and heavier egg rests on the member 42, the member will be deflected to a substantially greater extent, approximately proportional to the weight of the egg. Fig. 7 clearly illustrates this difference between the little or no deflection caused by a small egg, shown on the left, and that caused by a larger egg, shown on the right. It is apparent that with this arrangement, the tops of all the eggs will be at an approximately uniform height, because the longer eggs, being heavier, will cause greater deflection of the resilient supporting member. If the weight of a large egg is insufficient to cause the desired deflection, the closing of the cover 24 will nevertheless press the egg down so that its top is even with the others, and the cushioning member will yield to permit this, without breaking the egg.

The longitudinal members 35, 36, and 37 of the filler rest on the bottom 20 and extend upwardly, preferably terminating substantially in the horizontal plane of the bottom of the recesses 28 in the front wall 23. These low longitudinal members cooperate with the recesses 28, the flexible bottom members 42, and the intermediate transverse members 39 to permit ready inspection of the contents of the container and to provide a pleasing and attractive container, as shown in Fig. 2, and hereinafer more fully described. This container displays in a substantially unobstructed manner the upper ends of the eggs, which all extend to approximately the same height, thus presenting a pleasing uniformity in appearance.

In order to enable the filler 32 to be more easily and rapidly inserted within the box, the longitudinal members 35, 36, and 37 have their lower corners beveled off, as shown at 57, Fig. 3. Thus the corners of the longitudinal partitions are not apt to catch on the ends of the container when the filler is inserted therein.

When filled containers of the class above described are stored or shipped, they are ordinarily piled in tiers, each tier extending in a direction transverse to the direction of the tiers immediately above and below. When so piled, the containers are subjected to a crushing effect caused by the weight of the tiers above. In order to prevent such crushing effect from breaking the eggs, means is provided for effectively supporting this weight. This supporting means is preferably secured by extending parts of the transverse partition members the full height of the box

so that the weight of upper tiers of containers is sustained by these transverse members. To compensate for the lack of the support due to the low longitudinal partitions, and to provide sufficient strength, the transverse partitions are made of thicker or heavier stock than the longitudinal members, as clearly illustrated in Fig. 1 on a somewhat exaggerated scale.

The forward ends of the intermediate transverse partitions 39 are preferably beveled downwardly as shown at 60, the front edges thereof terminating at the front 23 substantially at the height of the bottoms of the recesses 28, in order to interfere less with easy inspection of the eggs. The rear portions 61 of these intermediate transverse members extend to the top of the box and serve to support the cover, as above mentioned. The extreme or last transverse partition 38 at each end of the box preferably does not have its top edge beveled, but extends to the top of the box throughout its length, to provide additional support for the cover. The transverse partitions are supported partly by their interlocking engagement with the longitudinal partitions 35, 36, and 37, and partly by leg-like portions extending down into contact with the bottom 20 of the container outside of the outer longitudinal partitions 35 and 37. Inside the partitions 35 and 37, the bottoms of the transverse partitions 38 are cut as at 66 to conform to the shape of the cushioning members 42.

An additional support for the front edge of the cover 24 is desirable because the transverse partitions, due to the bevel 60, do not support the front edge of the cover except at the ends of the container. The desired support for this edge of the cover is provided by the tab 29 on the front of the container, which projects under and supports the tab 26 of the cover, as clearly shown in Fig. 6. The tongue 27 of the tab 26 extends down the outside of the tab 29 and in through the slot 30 in the front 23 and thus holds the cover in closed position. If desired, a suitable seal may be placed over the tabs 29 and 26, which seal if unbroken, assures the customer that the goods enclosed within the container have not been tampered with.

The container so far described comprises the preferred embodiment of the invention. Figs. 10, 11, and 12 show a modification in which the intermediate transverse members 39 are replaced by the transverse members 70 of the shape best shown in Fig. 12. The partitions 70 extend to the top of the box at the front, back, and middle, but have semi-circular recesses 71 cut in their upper edges at intermediate points. These recesses are placed substantially centrally of the spaces formed by the longitudinal partitions 35, 36, and 37 as clearly shown in Fig. 11. The portions 75 of the top edges of the members 70 serve as supports for the cover, while the recesses 71 permit a better view of the eggs than if no such recesses were provided. As the members 70, in this form of the invention, provide a support for the front edge of the cover, the tab 29 shown in the preferred form may be eliminated, if desired, as clearly shown in Fig. 10. With the exception of the changes enumerated above, this modified form of the invention may be otherwise the same as the preferred form.

The box, as well as the filler with its cushioning member, is preferably collapsible so as to facilitate shipping and storing. The boxes and fillers are usually shipped in the knock-down condition, and in separate bundles, to the place where they are to be used. When the containers are to be filled, the box is erected, and the filler with its cushioning member is opened and inserted in the box, in the usual and well known manner.

While the above container has been described with particular reference to eggs, it is obvious that the same construction may be used for glassware or other fragile or delicate articles. The number of compartments may also be varied to suit the material being packed. The present illustration shows twelve such compartments suitable for containing one dozen eggs.

While certain embodiments of the invention have been described, it is to be understood that the inventive idea may be carried out in a number of ways. This application is therefore not to be limited to the precise details described, but is intended to cover all variations and modifications thereof falling within the spirit of the invention or the scope of the appended claims.

I claim:

1. A container comprising a body having a bottom, collapsible partition means placeable in and removable from said body, said partition means comprising a plurality of substantially parallel members spaced from each other when said partition means is erected, and cushioning means secured to said partition means for movement as a unit therewith, said cushioning means comprising a resilient member substantially in contact with one of said parallel members at a point above said body bottom and extending in a downwardly inclined direction to said bottom at a point adjacent another of said parallel members when said partition means is erected and placed in said body, said resilient member extending downwardly substantially parallel to and partially between said parallel members when said partition means is removed from said body and collapsed.

2. A container comprising a body having a bottom, partition means subdividing said body into a row of cells, and a strip of sheet

material extending beneath all of said cells and having one portion resting on said bottom adjacent one side of said row and another portion held in elevated position above said bottom adjacent another side of said row to provide a resilient bottom for supporting fragile articles in said cells.

3. A container comprising a body having a bottom, partition means subdividing said body into a row of cells, said partition means comprising a plurality of longitudinal and transverse partition members, and a strip of sheet material secured to one of said longitudinal members and extending beneath said transverse partition members in transversely inclined position with one portion resting on said bottom adjacent one side of said row and another portion held in elevated position above said bottom by said one longitudinal member, said strip having slits subdividing it substantially between said cells to provide resilient bottoms for supporting articles in said cells, the bottom of each cell being individually deflected in accordance with the weight of an article resting thereon, independently of the bottoms of other cells.

4. A container comprising a body having walls and a cover, and a partition structure within said body dividing the space therein into a plurality of article receiving compartments, said partition structure comprising a plurality of spaced longitudinal partition members and a plurality of spaced transverse partition members, said body having a substantial portion of the upper edge of one wall materially lower than the tops of the articles supported in said compartments, the partition members extending in one direction having the top edges thereof lower than portions of the top edges of other partition members and lying substantially in the horizontal plane of said portion of the upper edge of said wall, a plurality of the other partition members each having a portion of its top edge at a height to support said cover and another portion thereof beveled downwardly substantially to the horizontal plane of said portion of the upper edge of said wall, to aid easy inspection of articles in said compartments.

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