Dec. 23, 1930. E. E. HALE 1,785,898

EGG CARTON

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Fig. 1.

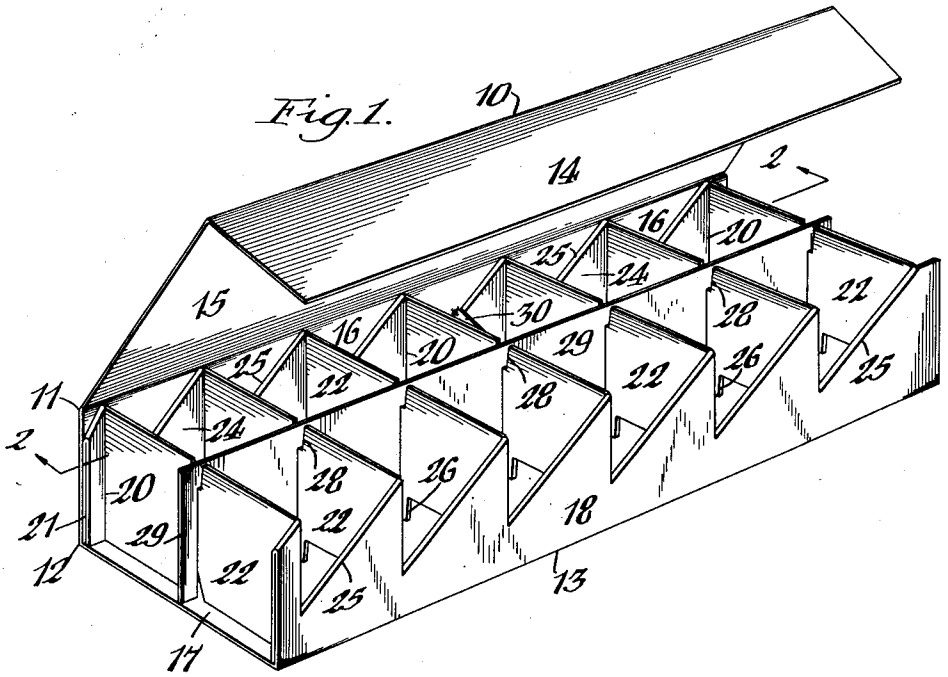


Fig. 2.

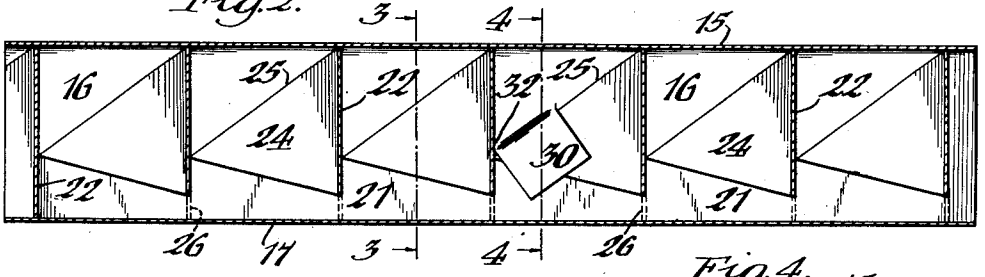


Fig. 3.

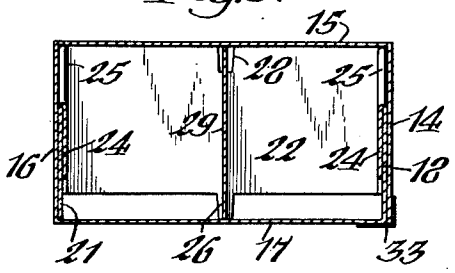
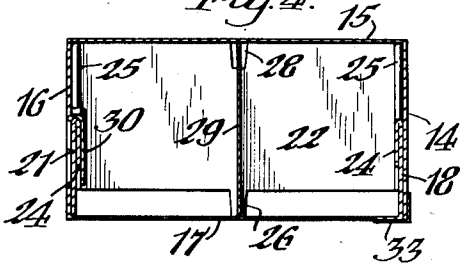


Fig. 4.



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Fig. 5.

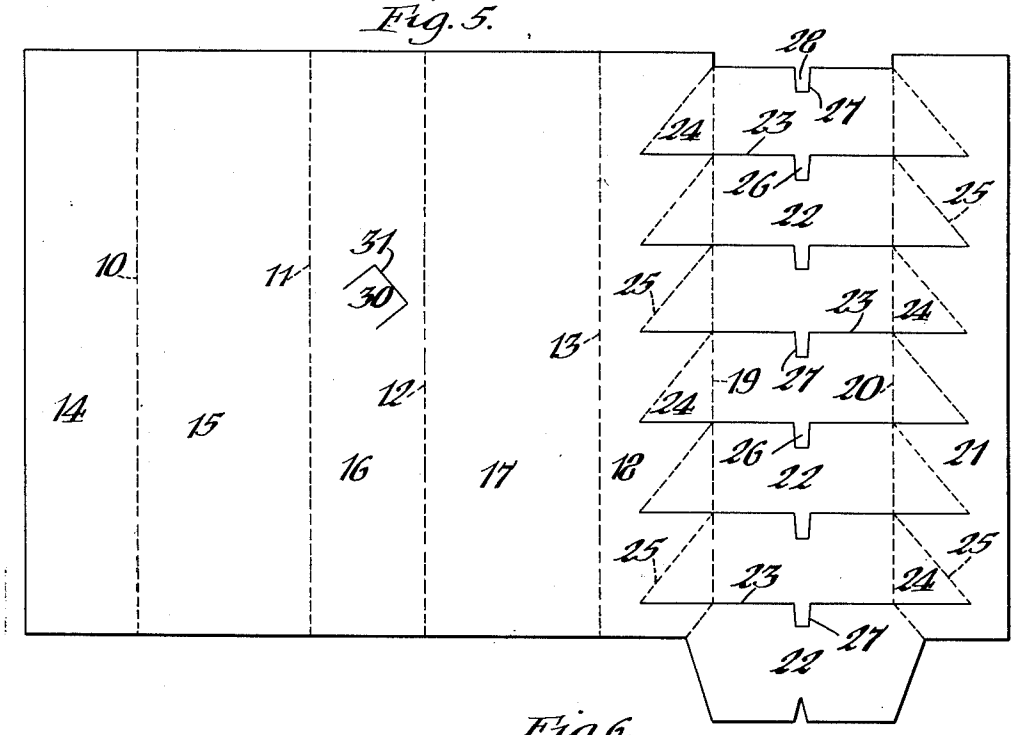


Fig. 6.

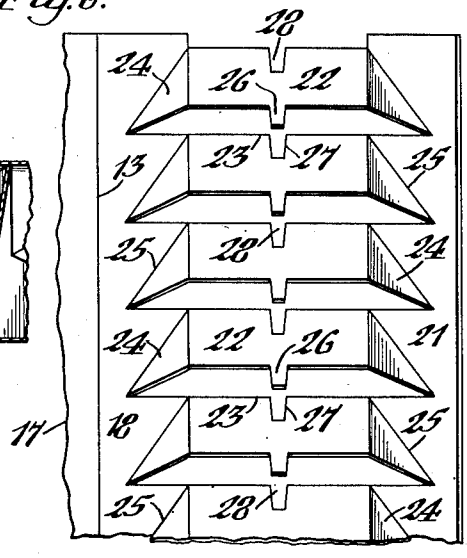


Fig. 7.

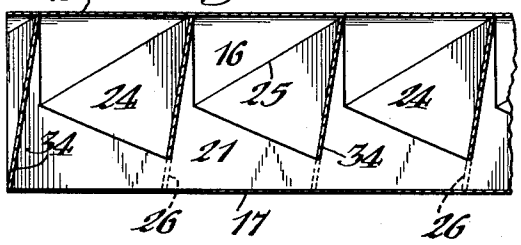
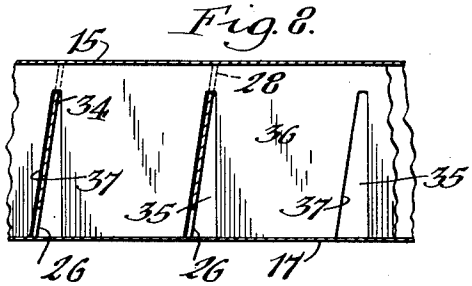


Fig. 8.



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UNITED STATES PATENT OFFICE

EDWARD EVERETT HALE, OF BUFFALO, NEW YORK

EGG CARTON

Application filed February 2, 1929. Serial No. 337,135.

This invention relates to certain new and useful improvements in cartons of the type embodying compartments and particularly designed for receiving eggs.

One of its objects is the provision of a collapsible carton of this character which is formed from a single blank of material and whose parts are so organized and arranged as to enable the walls and partitions forming the compartments to readily fold and unfold in collapsing and distending of the carton.

Another object of the invention is to provide improved means for supporting the transverse partitions from the side walls of the carton and for preventing the bottom wall thereof being distended inwardly.

A still further object is the provision of an effective means for joining the parts of the carton and prevent their relative movements in the unfolded or used position of the carton.

In the accompanying drawings:—

Figure 1 is a perspective view of an egg carton embodying my improvements. Figure 2 is a longitudinal section thereof on line 2—2, Figure 1. Figures 3 and 4 are cross sections on the correspondingly numbered lines in Figure 2. Figure 5 is a plan view of the carton blank. Figure 6 is a fragmentary view thereof partially folded. Figure 7 is a fragmentary longitudinal section, similar to Figure 2, showing a modified form of the carton. Figure 8 is a sectional view similar to Figure 7.

Similar characters of reference indicate corresponding parts throughout the several views.

The blank from which my improved carton is formed is rectangular in shape and embodies a body portion and a partition-bearing portion. The body portion is scored or creased at 10, 11, 12 and 13 to provide a cover-flap 14, a cover 15, a rear wall 16, a bottom 17 and a front wall 18. The partition-bearing portion, which forms a continuation of the front wall 18, is provided with similar scorings 19, 20 which define the length of the partitions transversely of the carton and is also provided with an end strip or auxiliary rear wall 21 over which the rear wall 16 extends in the unfolded position of the carton.

The front wall 18 and auxiliary rear wall 21 constitute the members of the carton which support the partitions 22, which are produced by providing that portion of the blank with a plurality of equi-spaced cuts or slits 23 arranged transversely of the blank. As shown in Figure 5, these cuts intersect the scorings 19, 20 and extend beyond the same into the adjoining front wall and the auxiliary rear wall, say about midway of their height. The front and rear ends of these partitions are connected with the companion front and rear walls 18 and 21 by triangular-shaped wings or tabs 24 which are formed from the upper portions of said walls and which are joined to the latter and said partitions by double or reverse folds. One of these folds is produced by the scorings 19, 20 and the other is formed by angular scorings 25, which are connected at their upper ends to the points of intersection of said scorings 19, 20 and the cuts 23 while their lower ends are connected to the terminating ends of said cuts, as clearly shown in Figure 5. Upon folding the strips or auxiliary rear wall 21 upwardly, as seen in Figure 6, the partitions are automatically swung to an upright position, the wings 24 being simultaneously folded against and in parallel relation to the inner faces of said rear wall and the front wall 18 where they reliably brace the partitions.

By thus forming the partitions, their top edges are brought flush with the corresponding edges of the front and rear walls of the carton, so that when the cover 15 is folded over, it is reliably prevented from being distended inwardly by the partitions as well as the front and rear walls of the carton. The lower ends of the partitions, on the other hand, are spaced from the bottom 17 of the carton and to guard against the latter being distended inwardly and possibly breaking the eggs, I provide supporting tongues or projections 26 which are preferably integrally formed from the partitions by providing substantially U-shaped cuts or slits 27 therein in contiguous relation to the partition-cuts 23, whereby the resulting tongues are disposed centrally at the lower edges of the partitions and notches 28 are provided

at their upper edges to receive a longitudinal partition 29 which together with the transverse partitions provides a series of egg-cells or compartments. These tongues also assist the wings 24 in supporting the partitions in their unfolded or operative position.

For the purpose of maintaining the carton in its unfolded or distended position and prevent relative longitudinal displacement of the partitions of their supporting walls, a foldable locking tab 30 is provided which is formed in the rear wall 16 by means of a U-shaped cut 31 and which is adapted to engage or overlap one of the angular folds produced by the corresponding scoring 25 between the respective wing 24 and the auxiliary rear wall 21, as seen in Figure 4. The folding line of the tab is at the same angle as the scorings 25 and it is so positioned that, in its operative position, its lower edge abuts against the adjoining upright edge 32 of the auxiliary rear wall, as shown in Figure 2, preventing longitudinal shifting of the partition-bearing portion of the carton relative to its body portion.

After the eggs are packed in the carton, the cover-flap 14 may be secured to the front wall 18 and bottom 17 of the carton by a gummed seal 33 or like element.

In the modified form of the invention shown in Figure 7, the transverse partitions 34, instead of being disposed vertically of the carton, are arranged at an angle to the vertical or in a slightly longitudinal sloping position, facilitating the insertion and removal of the eggs to and from their compartments. This sloping effect is produced by merely varying the angle of the scorings 25 with the scorings 19, 20. The sloping of the partitions in Figure 7 was accomplished by decreasing the angle at the intersection of the scorings 19, 20 and 25.

In this embodiment of the invention the notches 35 of the longitudinal partition 36 which engage the respective transverse partitions 34 are so formed that one of the edges 37 of each notch is inclined in parallel relation to said transverse partitions and constitutes a brace for the tongues 26 of the latter, as shown in Figure 8.

I claim as my invention:—

1. A collapsible carton formed from a blank which is cut and creased to provide a bottom, sides, and transverse partitions between the sides connected therewith by folds, the top and bottom edges of the partitions having complemental notches and tongues formed by slitting the same, said notches and tongues interlocking with one another in the collapsed position of the carton and the tongues engaging the bottom of the latter in its unfolded position.

2. A collapsible carton formed from a blank which is cut and creased to provide a bottom, sides, and transverse partitions between the sides, foldable flaps connecting the ends of said partitions with said sides, the top and bottom edges of adjoining partitions having complemental notches and tongues formed by slitting the same, said notches and tongues interlocking with one another in the collapsed position of the carton and the tongues engaging the bottom of the latter in its unfolded position, and a longitudinal partition intersecting said transverse partitions and engaging the notches therein.

3. A collapsible carton formed from a blank which is cut and creased to provide a bottom, sides, and transverse partitions between the sides, foldable flaps connecting the ends of said partitions with said sides, and a folding locking tab formed in one of the sides of the carton for engagement with one of said foldable flaps to prevent relative displacement of such parts.

4. A collapsible carton formed from a blank which is cut and creased to provide a bottom, sides, and transverse partitions between the sides, integral supports connecting the front and rear edges of the partitions with said sides, the top edges of said partitions being horizontally in line with the corresponding edges of said sides when the carton is unfolded and the lower edges of the partitions being spaced from the carton-bottom, the top and bottom edges of adjoining partitions having complemental notches and tongues formed by slitting the same intermediate their ends, said tongues engaging the carton-bottom in its unfolded position to support said partitions and prevent upward distention of said bottom, and a longitudinal partition intersecting the transverse partitions and engaging the notches therein.

5. A collapsible carton formed from a blank which is cut and creased to provide a bottom, front and rear sides, transverse partitions foldably sustained between said sides, a second rear side foldable in overlapping relation to said first-named rear side, a cover, the folds between the partitions and the sides being at an angle to the horizontal, and a folding tab formed in said second rear side and arranged to engage the companion rear side to prevent relative displacement of said parts in the unfolded position of the carton, the fold of said tab being disposed at the same angle as that of said partition-folds.

6. A collapsible carton, comprising a bottom, sides and transverse partitions formed from a blank, the blank having a plurality of horizontal slits to provide said partitions, and foldable portions to permit the sides and the partitions to fold and unfold relatively to one another in collapsing and distending the carton, the foldable portions being provided by a vertical scoring of the blank at the ends of the partitions between the slits and

short of their terminating points, and an angular scoring thereof intersecting the vertical scoring at one end and the terminating point of the adjoining horizontal slit at its other end.

7. A blank for a foldable carton, comprising a sheet-like body having a portion scored in the direction of its length to provide a bottom, front and rear sides, and a cover, and a partition-bearing portion adjoining said front side and including a strip, longitudinal scorings between the partition-bearing portion, its strip and said front side, horizontal slits in said last-named portion forming resulting transverse partitions, said slits intersecting said longitudinal scorings and extending beyond the same, and angularly disposed scorings formed in the front side of said body portion and said strip and intersecting the longitudinal scorings at one end and the terminating points of the respective slits at their other ends.

8. A blank for a foldable carton, comprising a sheet-like body having a portion scored in the direction of its length to provide a bottom, front and rear sides, and a cover, and a partition-bearing portion adjoining said front side and including a strip, longitudinal scorings between the partition-bearing portion, its strip and said front side, horizontal slits in said last-named portion forming resulting transverse partitions, said slits intersecting said longitudinal scorings and extending beyond the same, angularly disposed scorings formed in the front side of said body portion and said strip and intersecting the longitudinal scorings at one end and the terminating points of the respective slits at their other ends, and substantially U-shaped cuts formed in said partitions in contiguous relation to said horizontal slits to provide a notch at one edge of each partition and a tongue at its opposite edge.

9. A collapsible carton formed from a blank which is cut and creased to provide sides, transverse partitions between the sides and connected therewith by folds, and top and bottom walls, the opposite transverse edges of said partitions having complemental notches and tongues formed by slitting the same, said notches and tongues nesting one within the other in the collapsed position of the carton, the tongues constituting abutments in the unfolded position of the carton engageable with one of said walls to resist its inward displacement, and a longitudinal partition engageable with said notches.

10. A blank for a foldable carton, comprising a sheet-like body having a portion scored in the direction of its length to provide a bottom, front and rear sides, and a cover, and a partition-bearing portion disposed between said front and rear sides and including substantially horizontal slits forming resulting transverse partitions and longitudinal scorings at the junction of said partitions with said sides, and substantially U-shaped cuts formed in said partitions in contiguous relation to said slits to provide a notch at one edge of each partition and a tongue at its opposite edge.

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