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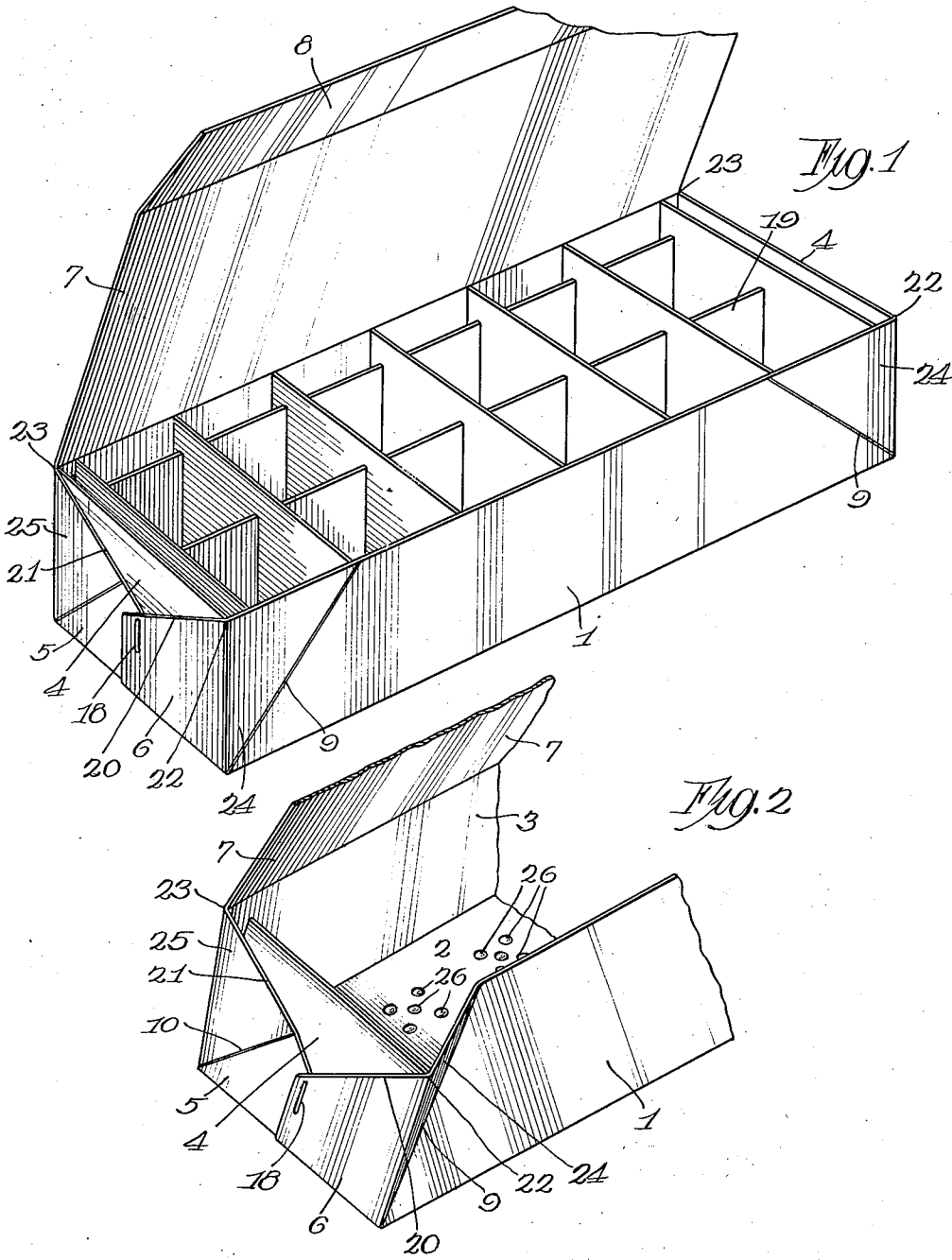
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W. A. SCHURMANN

EGG CARTON

Filed April 29, 1925

2 Sheets-Sheet 1



Inventor:  
William A. Schurmann  
1311 Arthur F. Durand  
City.

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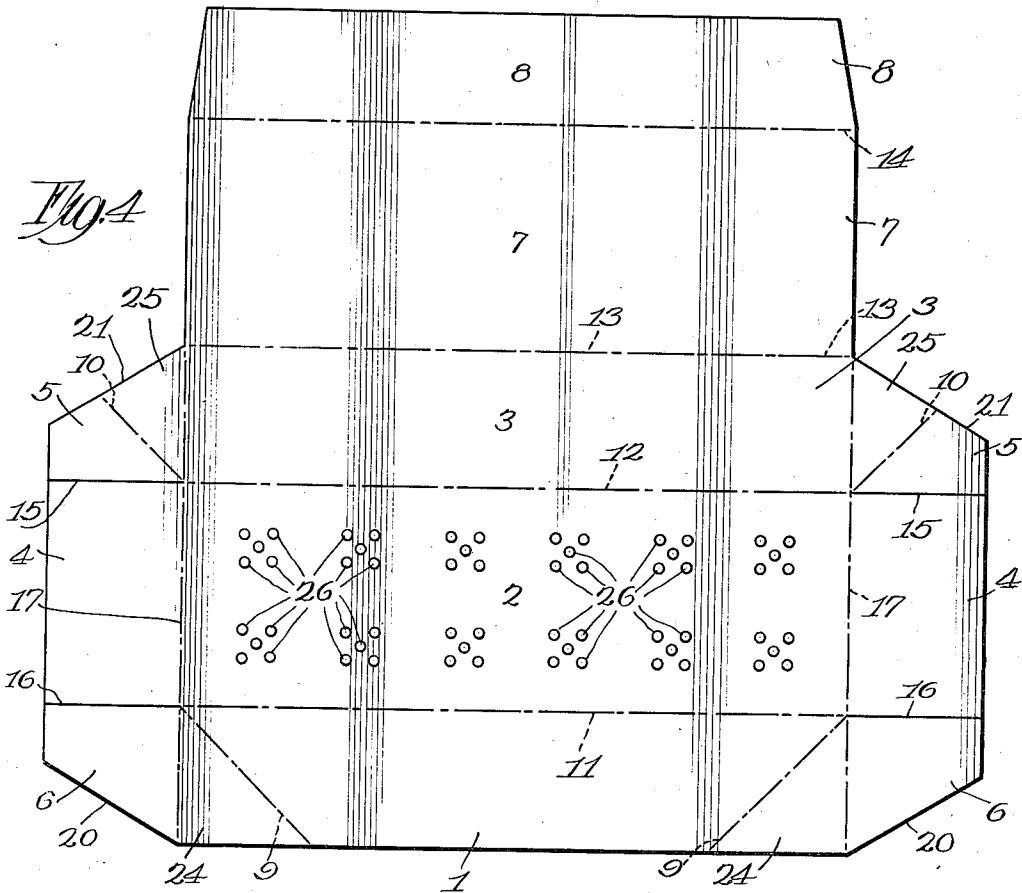
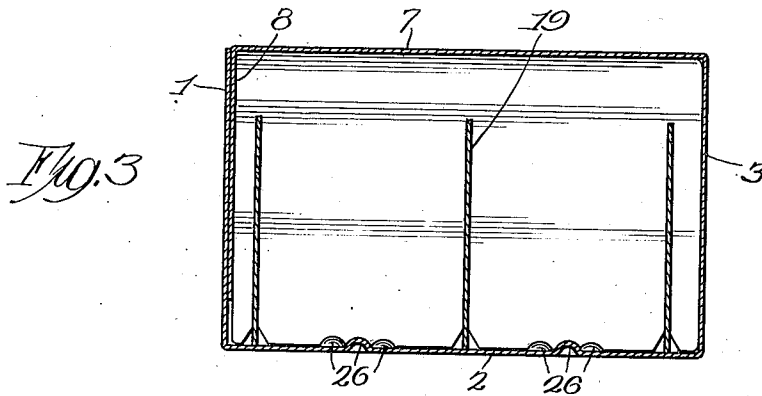
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2 Sheets-Sheet 2



Inventor:  
William A. Schurmann  
By Arthur H. Duward  
Att'y.

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# UNITED STATES PATENT OFFICE.

WILLIAM A. SCHURMANN, OF CHICAGO, ILLINOIS, ASSIGNOR TO W. A. SCHURMANN & CO., INC., OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

## EGG CARTON.

Application filed April 29, 1925. Serial No. 26,589.

This invention relates to egg cartons or boxes for use in shipping and selling eggs, more particularly to boxes of this kind made of paper or similar sheet material, having front and rear and end walls and a bottom, together with a cover which can be folded down to cover the eggs, usually held in two rows by a paper filler.

One of the objects of the invention is to provide a novel structure and arrangement whereby the grain of the paper extends crosswise of the fold lines of the blank from which the box or carton is made, or crosswise of the longer longitudinal fold lines of the blank, whereby the paper will break sharply along such fold lines, and thus provide a stiffer box and a carton having sharp and well defined corners.

Another object is to provide an egg carton or box having its integral bottom wall provided with novel cushioning means for engaging the lower ends of the eggs, thereby to reduce danger of breakage of the eggs.

Another object is to provide a novel construction and arrangement whereby the overlapping flaps at the opposite ends of the box are cut down at the upper edges thereof, so that their upper edges extend downwardly from the front and rear corners of the box or carton, thereby to effect a saving of material and other beneficial results, as will hereinafter more fully appear.

To these and other useful ends, the invention consists in the matters hereinafter set forth and claimed, and shown in the accompanying drawings, in which,—

Fig. 1 is a perspective of an egg carton or box involving the principles of the invention, showing the cover thereof in open position, and showing the egg filler in position within the box.

Fig. 2 is a perspective of a portion of the said egg carton or box, showing the same in partially folded condition.

Fig. 3 is a transverse section of said egg carton or box, showing the cover in closed position.

Fig. 4 is a plan of the paper blank from which the said box or carton is made.

As thus illustrated, the blank from which the box or carton is made, as shown in Fig. 4, comprises a front wall 1, a bottom wall 2, a rear wall 3, rectangular end walls 4, end flaps 5 and 6, a top cover 7 and a flap 8 for said cover. The front wall is preferably

creased at 9, and the flaps 5 are creased at 10 in the manner shown. Longitudinal crease lines 11, 12, 13 and 14 foldably connect together the said walls 1, 2, 3 and 7 and the flap 8 in the relation shown. Cuts 15 are made through the material between the end walls 4 and the flaps 5, and similar cuts 16 are made through the material between the end walls 4 and the flaps 6 of the blank. The transverse crease lines 17 separate the front wall from the flaps 6, separate the bottom 2 from the end walls 4, separate the rear wall 3 from the flaps 5, whereby the flaps 6 are flexibly connected to the ends of the wall 1, while the rectangular end walls 4 are flexibly connected to the ends of the bottom 2, while the flaps 5 are flexibly connected to the ends of the rear wall 3 in the manner shown.

Now when the said blank is folded it will be seen that the flaps 6 overlap the flaps 5, as shown in Figs. 1 and 2, and that a single staple 18 is inserted through each end of the box, through the overlapping portions of the flaps 5 and 6 and through the end walls 4 of the box, whereby each end wall of the box comprises the inner, rectangular wall 4 and the two outer, overlapping flaps 5 and 6 disposed in the relation shown. When the blank is thus folded into box form, the filler 19, of paper or any suitable material, may be inserted as shown, to provide rectangular cells for the eggs in the usual manner, whereby the box will hold a dozen eggs in two rows, as shown. When a blank is thus folded, it will be seen that the edges 20 and 21 of the flaps 5 and 6 cross each other near the upper end of the staple 18, so that these upper edges extend downwardly from the front and rear upper corners 22 and 23 of the box, thus exposing a triangular portion of the surface of each rectangular end wall 4, the points of which triangle coincide with the middle of wall 4 and the said corners 22 and 23 of the box. In this way the flaps 5 and 6 are of less area than heretofore, but are sufficient to overlap and be secured to the middle portion of the end wall 4, in such relation that the latter can fold down flatwise upon the bottom 2 of the box, but with the triangular portions 24 disposed between the outer surface of the front wall 1 and the inner surface of the wall 4, at each end of the box, when the latter is collapsed or folded down flat by pushing the front wall

1 inwardly and then pushing the end walls downward. At such time, the flaps 5 fold along their fold lines 10, as shown in Fig. 2, so that the triangular portions 25 of the flaps 5 will bear upon the outer surface of the flaps 6, thereby permitting the back wall 3 to bear upon the outer surface of the walls 4 at each end of the box, when the latter is collapsed and flattened out for storage or shipment. The straight low edges 20 and 21 provide a wide clearance through which pressure may be exerted on the outer surfaces of the walls 4, by the thumbs or by machinery to push them down flat against the bottom 2, and in this way the upper edges of the flaps 5 and 6 are perfectly straight from the front and rear corners of the box to the point where they cross or intersect each other at the approximate center of each end wall of the box. In this way the end walls 4 provide stiff braces between the front and rear walls 1 and 3 of the box, when the latter is unfolded and in use, and the end walls do not tend to collapse, but stand rigidly to keep the box in open condition when the filler 19 is inserted. When the box is closed, the flap 8 is pushed down between the filler and the front wall thereof, and forms a stiff brace between the two end walls of the box, tending to keep the front wall with its foldable end sections 24 stretched out straight and rigid.

Now the grain of the paper from which the blank is made, preferably, as a matter of further and special improvement, extends parallel with the crease line 17, and at right angles to the crease lines 11, 12, 13 and 14, whereby the material will break sharply along the lines 11, 12, 13 and 14, and produce sharp corners, instead of the more or less rounded corners which would be formed if the grain of the paper were made to extend parallel with these crease lines. This results in flat top and bottom walls of the box and flat front and rear walls, instead of walls which are slightly bowed outwardly, as is liable to be the result when the grain of the paper is made to extend parallel with said crease lines 11, 12, 13 and 14, in a manner that will be readily understood.

As a matter of further and special improvement, the integral bottom wall 2 of the paper box or carton is preferably provided with cushioning means in the form of a group of dots 26 for each egg cell of the egg filler 19 previously mentioned. It will be seen that the group of dots at the bottom of each cell is formed in such a manner that there are preferably four outer dots arranged at the corners of a rectangle, so that there is a dot opposite each corner of the egg cell, and a fifth dot in the center of the group. Thus each egg if exactly in position rests upon the center dot of the group, and is held against displacement toward the four cor-

ners of the egg cell by the other dots, it being understood that the lateral displacement of the lower end of the egg is more liable to occur toward a corner of the cell, than toward a side thereof. These dots are preferably formed by upwardly pressed portions of the paper, so that each dot is hemispherical in shape and bulges upwardly on the top surface of the bottom wall, and presents a hollow on the lower surface of the bottom. In other words, each dot is convex on its upper side and concave on its lower side, in the manner shown more clearly in Fig. 3 of the drawings. In this way the cushioning means for each egg cell is formed by a group of concavo-convex formation in the bottom wall of the box. They are called dots because when viewed from above they are round and look like small dots formed on the top surface of the bottom wall of the box, there being five of these dots for the bottom of each egg cell, arranged in the manner shown and described, thus providing a cushion for the lower end of each egg.

Thus the five upwardly pressed dots for the bottom of each egg cell provide a center cushioning means, the center dot, with surrounding cushioning means spaced therefrom, and with the center cushioning means in the center of the surrounding cushioning means, whereby the lower end of the egg will rest on the center cushioning means, and will encounter some portion of the surrounding cushioning means if displaced therefrom, in any direction.

It will be seen that the crease lines 10 are oblique to the edges 21 of the rear flaps, and that the crease lines 9 are oblique to the edges 20 of the front flaps, and the result is that the front and rear flaps have straight upper edges for their full length, so that the carton folds easily in the desired manner, as shown and described.

It will also be seen that the cushioning means 26, comprising one small center cushion and surrounding cushioning means, for the center of the bottom of each cell, in effect form a single cushion for the center of the bottom of each cell, as the portions 26 are so close together than the practical effect is a single cushion at the center of the bottom of each cell. In effect, also, as the portions 26 are so close together, the single cushion thus provided for the center of the bottom of each cell is substantially flat but rough topped, as the elevations 26 are all of the same height, so that their tops are all in the same horizontal plane, the effect being a roughened and flat-topped cushion for the center of the bottom of each cell.

Without disclaiming anything, and without prejudice to any novelty disclosed, what I claim as my invention is:

An egg carton formed from a blank of

sheet of material having integral front and rear and bottom and end walls, and a filler in the carton to provide rectangular egg cells, said integral bottom of the carton having a center cushioning means for centrally engaging the lower end of each egg cell, and surrounding cushioning means with said center cushioning means in the center thereof, said surrounding means being in position to engage the lowest surface of the egg, if the lower end of the egg is displaced sidewise, said center and surrounding cushioning means being of the same height and disposed close together, with their tops all in the plane of the lower end of the egg, at the center of the bottom of each cell, to prevent the lower end of the egg from slipping down between any of said cushioning means, said cushioning means comprising a group of upwardly pressed dots, five in number, each outer dot being opposite one corner of the egg cell, whereby the group is rectangular, with the fifth dot in the center thereof, and with the tops of said dots all in said plane below the egg.

Specification signed this 24th day of April, 1925.

WILLIAM A. SCHURMANN.