

April 1, 1952

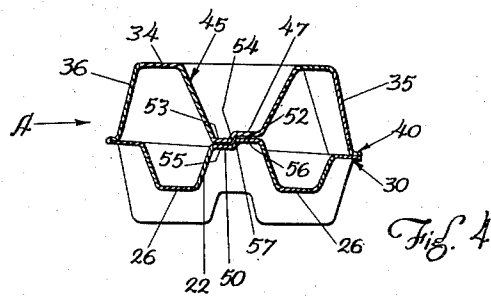
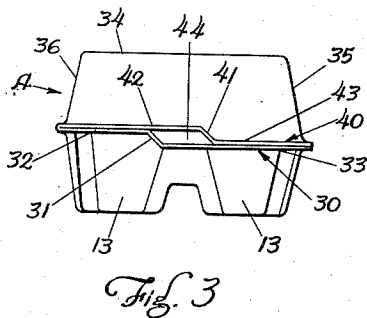
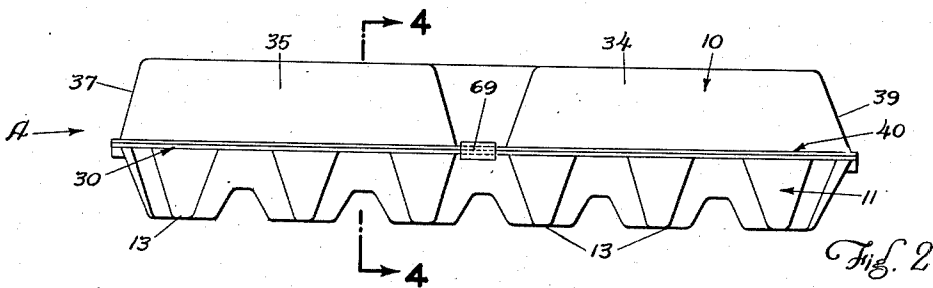
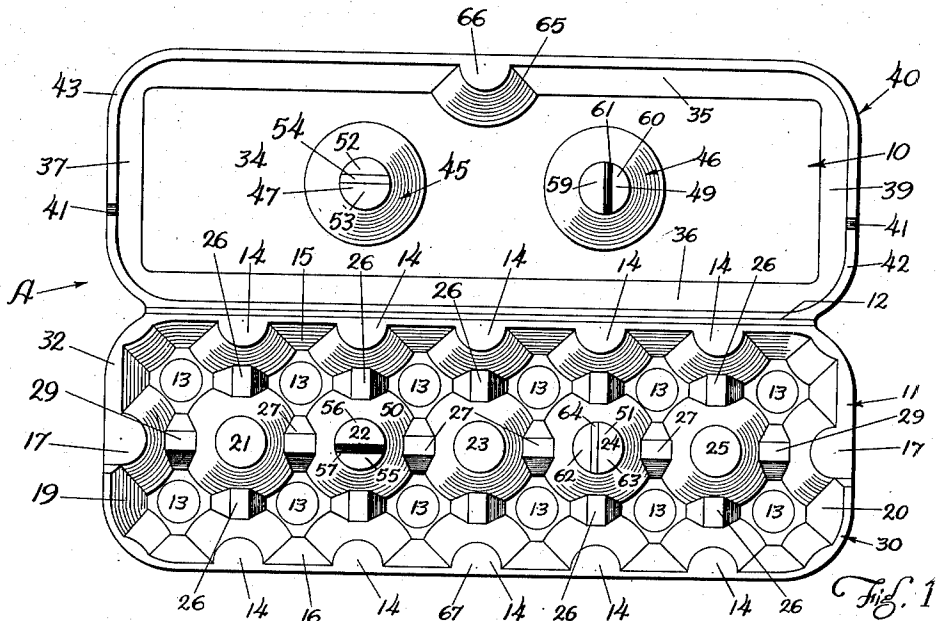
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2,591,446

EGG CARTON

Filed Dec. 12, 1947

2 SHEETS—SHEET 1



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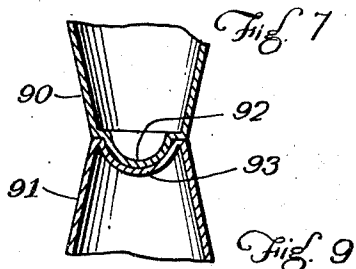
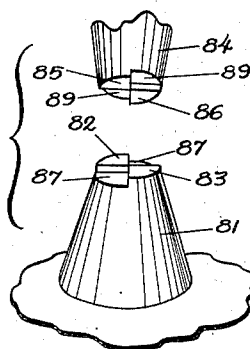
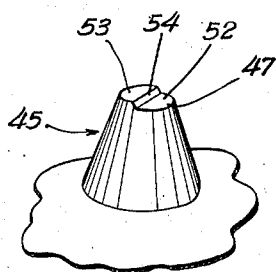
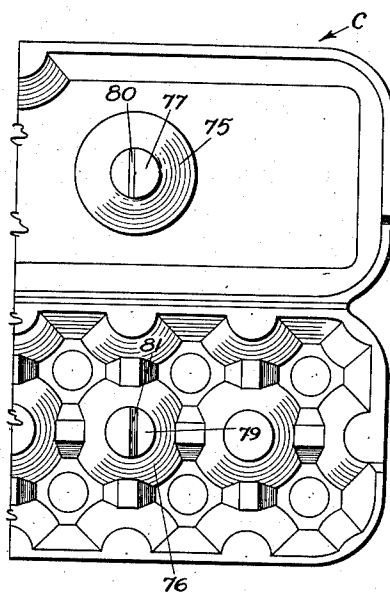
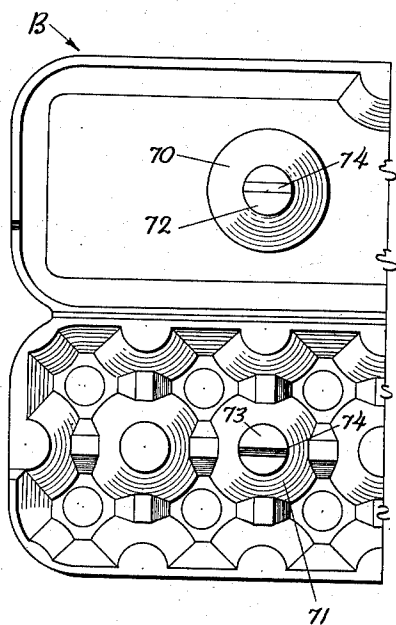
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2,591,446

EGG CARTON

Filed Dec. 12, 1947

2 SHEETS—SHEET 2



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EGG CARTON

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Delaware

Application December 12, 1947, Serial No. 791,367

4 Claims. (Cl. 229-2.5)

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My invention relates to an improvement in egg cartons wherein it is desired to provide a carton suitable for containing fragile articles such as eggs and the like.

Egg cartons have been manufactured for some time formed of paper pulp or similar material and shaped to accommodate a number of eggs. These cartons are often molded to provide pockets or cells into which the eggs are placed and these cells serve the purpose of spacing the eggs apart. In some instances these egg cartons have been formed with two pan shaped sections hingedly connected together along a fold line so that one section will rest in superimposed relation upon the other. It has been found that in some instances the top section has a tendency to shift relative to the bottom section. The only point of connection between the two sections lies at the hinge or fold line. As the molded pulp is often somewhat soft and yielding in character, this hinge line may at times become distorted to allow relative sliding movement between the two sections. In some instances the bodies of the sections may themselves distort sufficiently to allow relative movement. As a result the eggs are often damaged by the sliding of the top section relative to the bottom section.

It is the object of the present invention to provide a two part egg carton of molded pulp or of similar material which is so constructed as to inhibit relative slidable movement. Cooperable means are provided on the top and bottom sections of the carton to prevent sliding movement when the sections of the carton are in superimposed relation. As a result the carton is held in proper shape and the eggs remain undamaged.

A feature of the present invention lies in the provision of an egg carton having two sections formed of molded pulp and hingedly connected together, and in the particular manner in which these sections are formed. The bottom section includes a series of cells into which the individual eggs may be inserted. The top section comprises a pan shaped member having a substantially flat upper surface so that the top of the carton may be properly decorated or printed to show the origin of the eggs. The provision of a substantially flat surfaced upper section has been found extremely desirable and useful for advertising purposes.

A feature of the present invention lies in the provision of a top section having a substantially flat upper surface and having one or more downwardly extending projections or posts therein. These posts are designed to rest flush upon the

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upper surface of a spacing post of the lower section so that the two posts combine together to resist compression on inward flexing of the upper section.

5 An added feature of the present invention lies in the provision of an egg carton having two sections equipped with abutting posts and to provide a means of interlocking these posts so as to hold the sections from relative movement.

10 An additional feature of the present invention lies in the provision of a pair of opposed flanges on the edges of the two sections opposite the foldably connected edges thereof. A seal or stamp may be affixed to the carton at this point in such a way as to make it necessary for the stamp or seal to be broken before the eggs may be removed. As a result the eggs may be delivered to the customer in a sealed condition to prevent substitution or handling of the eggs.

20 These and other objects and novel features of my invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of my specification:

25 Figure 1 is a top plan view of my egg carton in open position showing the construction thereof.

Figure 2 is a side elevational view of the carton shown in Figure 1.

30 Figure 3 is a side elevational view of the carton shown in Figures 1 and 2.

Figure 4 is a sectional view through the carton, the position of the section being indicated by the line 4-4 of Figure 2.

35 Figure 5 is a top plan view of one end of a carton showing a modified form of construction.

Figure 6 is a view similar to Figure 5.

40 Figure 7 is a perspective view of one of the posts of my carton showing the construction thereof.

Figure 8 is a perspective view showing the co-operable ends of a pair of opposed posts, showing a modified form of construction.

45 Figure 9 is a sectional view through the co-operable ends of opposed posts of modified form.

The carton A illustrated in Figures 1 through 4 of the drawings includes a pair of pan shaped sections 10 and 11 which are connected together along a connecting fold line 12. In open position the two sections may rest upon a common supporting plane. In closed position the top section 10 folds over upon the bottom section 11 and is supported thereby.

50 As best illustrated in Figure 1 of the drawings, the section 11 includes a series of egg receiving

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cells or recesses 13 each of which is designed to hold an egg. The eggs in adjacent recesses are held in spaced relationship by inwardly projecting tapered ribs 14 which extend inwardly along the tapered longitudinal side walls 15 and 16. Similar projections 17 extend inwardly from the tapered end walls 19 and 20. Spaced posts 21, 22, 23, 24, and 25 are provided in longitudinally spaced relation. The posts 21 through 25 are transversely aligned with the inwardly extending projections 14 and are all in alignment with the end projections 17. In the particular structure shown partition walls 26 extend between each of the posts and the aligned projections 14. Aligned partition walls 27 connect the various posts described. Additional aligned partition walls 29 connect the posts with the inwardly projections 17 of the end walls. These partition walls 29 extend between the posts 21 and 25 and the adjacent projection 17.

The section 11 is provided with an outturned marginal flange extending about the same. The tops of the inwardly extending projections 14 and 17 are substantially in alignment or co-planar with the adjacent portions of this marginal flange 30. The upper extremities of certain of the posts separating the egg cells also extend onto the plane of the peripheral flange 30. For example the upper ends of the posts 21, 23, and 25 may be on the same plane as the flange 30. In some instances the flange 30 may be off-set at 31 so that the portion 32 of the flange 30 which is most closely adjacent the upper section 10 may be on a somewhat higher plane than the remaining portion 33 of this flange. This off-set flange structure, however, is not by itself claimed as a novel feature in the present invention.

The upper section 10 comprises a generally pan shaped enclosure having a generally flat base surface 34 and outwardly tapering walls. The longitudinal tapered walls 35 and 36 lie over the side walls 16 and 15 respectively of the lower section 11 in closed position of the carton. Inclined end walls 37 and 39 lie above the slanting side walls 19 and 20 of the base section. A marginal flange, indicated in general by the numeral 40, encircles the upper section 10. This flange 40 may be formed in two parts connected by opposed off-sets 41. The portion 42 of the flange 40 which is most closely adjacent the lower section 11 may be on a somewhat lower elevation in open position of the carton than the remaining flange portion 43. In closed position of the box the flange portion 43 rests upon the flange portion 33 of the flange 30, while the flange portion 42 rests upon the flange portion 32. In this way an opening 44 may be provided in the ends of the carton between the two sections to serve for ventilating purposes. As previously mentioned this feature is not specifically claimed alone in the present application.

A pair of posts 45 and 46 are provided integral with the base panel 34 to project upwardly therefrom in open position of the carton. These posts 45 and 46 are provided with upper surfaces 47 and 49 which are designed to abut against the upper surfaces 50 and 51 respectively of the posts 22 and 24 in closed position of the carton. The abutting relation of these posts may best be noted in Figure 4 of the drawings. These posts tend to prevent the compression of the upper part of the carton and serve to strengthen and reinforce it against crushing.

It will be noted that the upper surfaces 47 and 50 of the posts 45 and 22 respectively are divided into two surface areas connected along off-sets.

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The upper surface 47 includes surface portions 52 and 53 which are connected along the off-set 54. The surface 50 of the post 22 is formed of two off-set portions 55 and 56 connected along the off-set 57. In closed position of the carton, the surface 52 abuts against the surface 55, while the surface 53 abuts against the surface 56. The off-sets 54 and 57 form shoulders for preventing the top section 10 from sliding relative to the bottom section 11.

The upper surface 49 of the post 46 is divided into two surface areas 59 and 60 connected by an off-set 61. The upper surface 51 of the post 24 is similarly provided with two surface portions 62 and 63 connected together along the off-set 64. The surfaces 59 and 62 abut in closed position of the carton as do also the surfaces 60 and 63. The off-sets 61 and 64 form a shoulder which prevents lateral movement of the top section 10 relative to the bottom section 11 in closed position of the carton.

An inward projection 65 is provided in the front carton wall 35 of the top section 10 in opposed relation to one of the inward projections 14 on the carton side wall 16 of the lower section 11. The top surface 66 of the projection 65 extends flush with the flange 40. Accordingly when the two sections of the carton are folded into superimposed relation the upper surface 67 of the central projection 14 abuts against the under-surface 66 of the projection 65 so as to provide a pair of flat bearing portions in parallel relation. As indicated in Figure 2 of the drawings a stamp or seal 69 comprising a flat strip of gummed paper or the like may be folded over the free edges of the sections 10 and 11 and adhered to the flat surfaces on opposite sides of the abutting flanges. As a result the flanged edges may be sealed together at a point opposite the hinge line between the two sections so as to maintain the two sections closed until the carton is sold. Thus the eggs remain sealed within the carton until they reach the consumer and remain untouched and enclosed during this time. This action prevents the substitution of eggs in the carton and also insures the fact that the eggs which reach the ultimate consumer are the ones packed originally in the carton by the egg producer.

It will be noted that the off-sets 54 and 57 of two abutting posts extend generally parallel to the longitudinal center of the carton while the off-sets 61 and 64 may extend transversely of the longitudinal center thereof. As a result the top section may be prevented from sliding in two directions. The off-set engagement between the posts acts to more effectively lock the two sections from movement when closed thereby, preventing injury to the eggs contained.

If desired the off-sets in the abutting posts may be so arranged so all extend parallel to the longitudinal center of the carton, or may all be arranged parallel to the transverse center of the carton. In Figure 5 of the drawings for example, I disclose a carton B which is identical to the carton A previously described with the exception of the fact that all of the abutting posts such as the posts 70 and 71 are provided with upper surfaces 72 and 73, respectively, which have shoulders 74 therein which extend parallel to the longitudinal center of the carton. In the carton B, two sets of abutting posts are provided and all of the posts are provided with similar off-sets. As a result the sliding of one section of the carton relative to the other is definitely prevented in a forward and rearward direction.

In the carton C illustrated in Figure 6 of the drawings a structure is shown which is identical with the carton A, with the exception of the fact that all of the posts of the carton are provided with upper surfaces having off-sets parallel to the transverse center of the carton. The posts 75 and 76 are provided with upper surfaces 77 and 79 respectively having off-sets 80 and 81 therein which are parallel to the transverse axis of the carton. By reversing the off-sets on opposite sides of the transverse center of the carton, the top section of the carton C may be prevented from moving laterally in either direction.

The construction of the off-sets or shoulders on the posts is illustrated in detail in Figure 7 of the drawings. This figure shows posts such as 45, 46, 70 and 75 having a centrally located shoulder which prevents the shifting of the upper section of the carton relative to the lower section thereof. The shoulder need not extend the entire area of the post. A modified arrangement is illustrated in Figure 8 of the drawings in which the posts interlock to prevent movement of one part thereof in any direction relative to the other part. With such an arrangement a definite interlock between the sections of the carton in closed position of the carton is effected. As illustrated in Figure 8 of the drawings the post 81 is provided with two sector shaped projections 82 and 83 thereupon. The cooperable post 84 of the other section is provided with two sector shaped projections 85 and 86 which are angularly spaced relative to the projections 82 and 83. A sector shaped recess 87 is provided between the projections 82 and 83 and similar sector shaped notches or recesses 89 are provided on the post 84. Thus the projections 82 and 83 extend into the notches 89, while the projections 85 and 86 extend into the notches 87. In closed position of the carton the posts abut, with the ends of the various projections resting against the bases of the notches or recesses of the cooperating post. As a result the top wall of the carton is thoroughly reinforced against compression and at the same time the posts interlock so that no lateral movement may take place between the sections in closed relation thereof.

In Figure 9 of the drawings I disclose a modified form of construction. In this figure the posts 90 and 91 are generally similar to the opposed posts 45 and 22 or the opposed posts 46 and 24, except for the shape of the contacting post ends. The post 90 is provided with an integral rounded projection 92 on its extremity. This projection fits into a rounded socket 93 in the end of the post 91. When the carton is closed the two parts of the carton cannot shift in any direction due to the interfitting relation of the projection and socket.

In accordance with the patent statutes, I have described the principles of construction and operation of my egg carton, and while I have endeavored to set forth the best embodiment thereof, I desire to have it understood that obvious changes may be made within the scope of the following claims without departing from the spirit of my invention.

I claim:

1. An egg carton including a pair of substantially pan shaped sections hingedly connected together along a fold line, one of said sections having a series of spaced egg receiving recesses therein, spacing posts between certain of said recesses, the other of said sections comprising

a cover section and including a top panel and encircling side walls thereupon, said side walls resting upon said first named section in closed position of the carton, and a downwardly extending post on said top panel extending into abutting relation with one of said posts of said first named section, and cooperable shoulder means carried by said abutting posts and holding said two sections from lateral movement in one direction at points spaced from the side walls of said sections.

2. An egg carton including a pair of pan shaped sections foldably connected together, one of said sections including a series of egg receiving recesses and spaced posts projecting upwardly between certain of said recesses, the other section comprising a cover section having a top panel and encircling side wall panels designed to rest upon the first named section in closed position of the carton, a pair of posts projecting downwardly from said top panel into contacting relation with two of said posts of said first named section, and cooperable shoulder means on said contacting posts to hold said sections from relative lateral movement in one direction at points spaced from the side wall panels of the sections.

3. An egg carton including a pair of pan shaped sections foldably connected together, one of said sections including a series of egg receiving recesses and spaced posts projecting upwardly between certain of said recesses, the other section comprising a cover section having a top panel and encircling side wall panels designed to rest upon the first named section in closed position of the carton, a pair of posts projecting downwardly from said top panel into contacting relation with two of said posts of said first named section, and cooperable shoulder means on said contacting posts to hold said sections from relative lateral movement in a plurality of directions, said sections including said shoulder means being of substantially equal cross-sectional thickness throughout.

4. An egg carton including a pair of pan shaped sections foldably connected together, one of said sections including a series of egg receiving recesses and spaced posts projecting upwardly between certain of said recesses, the other section comprising a cover section having a top panel and encircling side wall panels designed to rest upon the first named section in closed position of the carton, a pair of posts projecting downwardly from said top panel into contacting relation with two of said posts of said first named section, and cooperable shoulder means on said contacting posts to hold said sections from relative lateral movement in any direction, said sections including said shoulder means being of substantially equal cross-sectional thickness throughout.

JAMES WARREN LENNON.

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