April 4, 1939. W. B. JONES 2,152,649

CELLULAR CARTON AND STRUCTURE THEREFOR

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Fig. 1

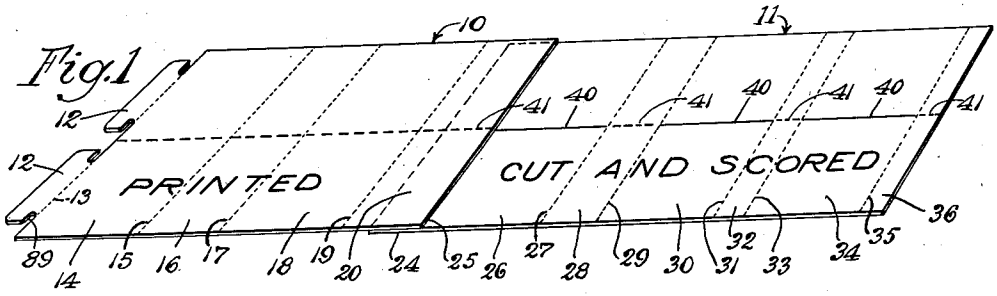
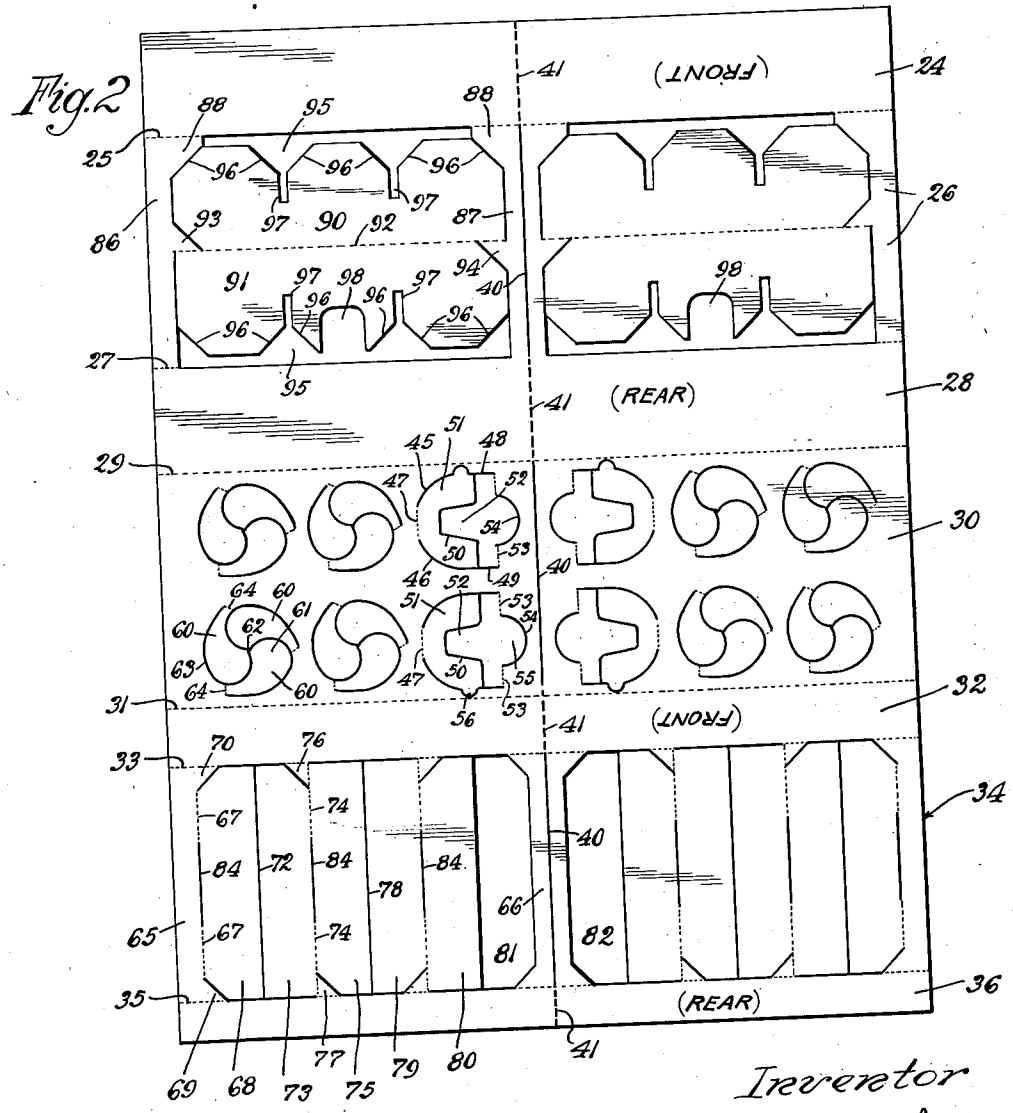


Fig. 2



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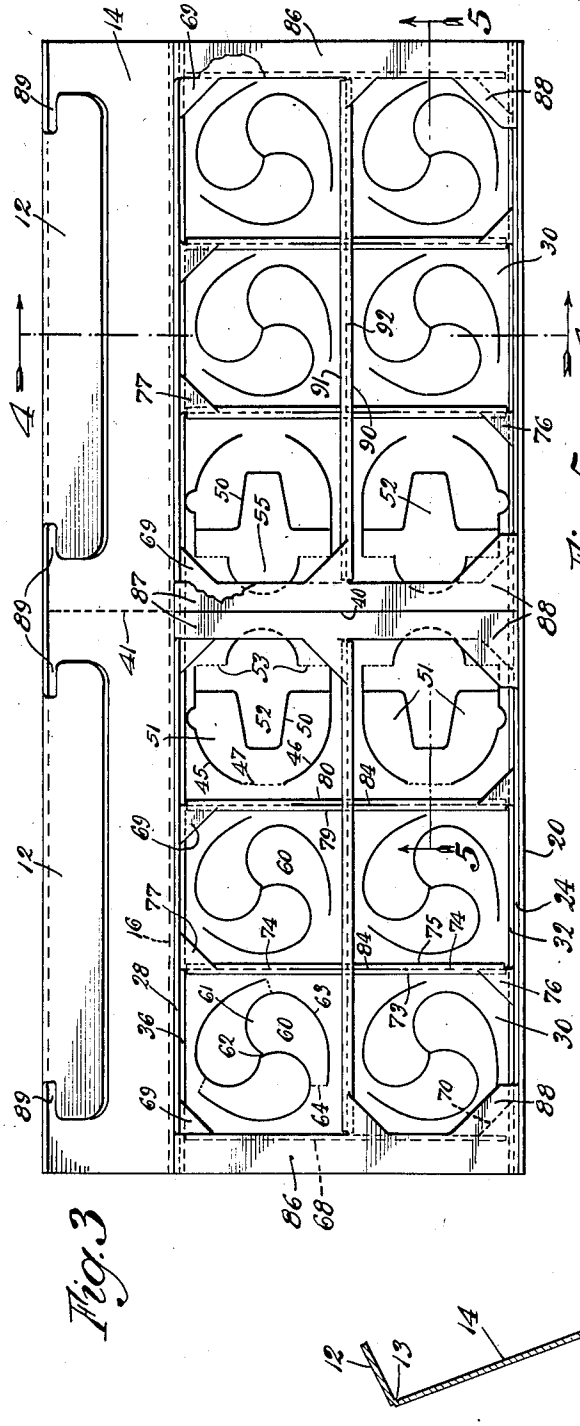


Fig. 3

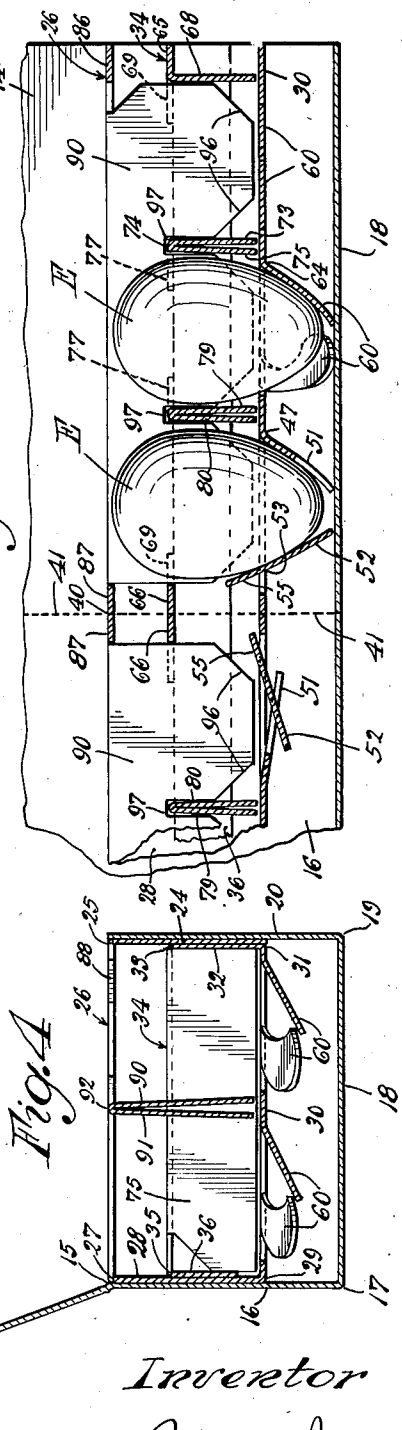


Fig. 5

Fig. 4

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Fig. 8

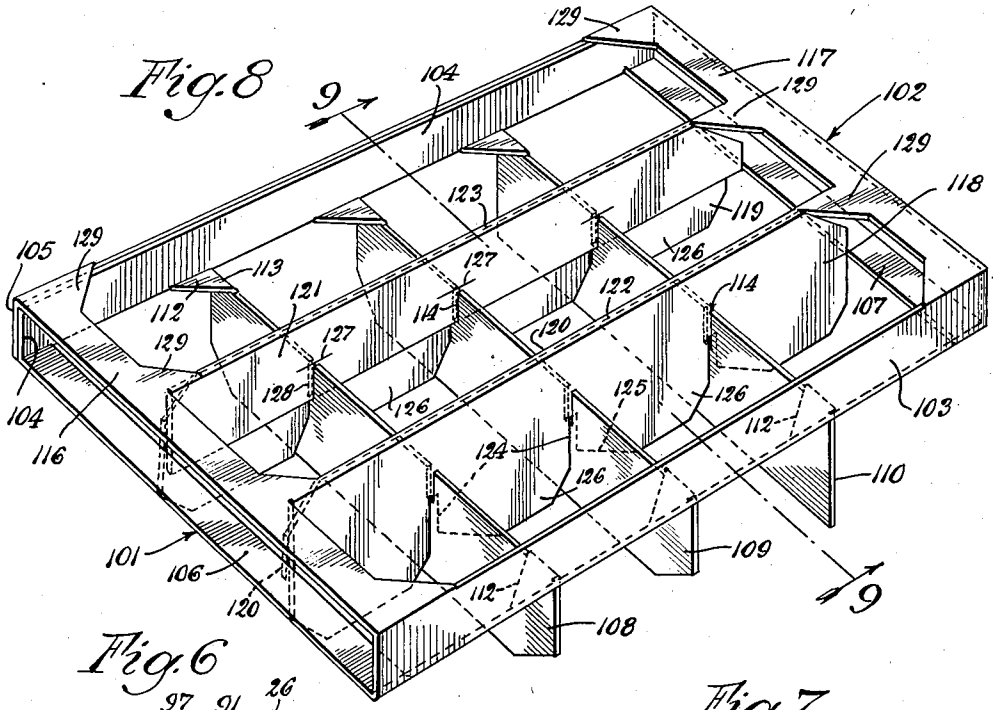


Fig. 6

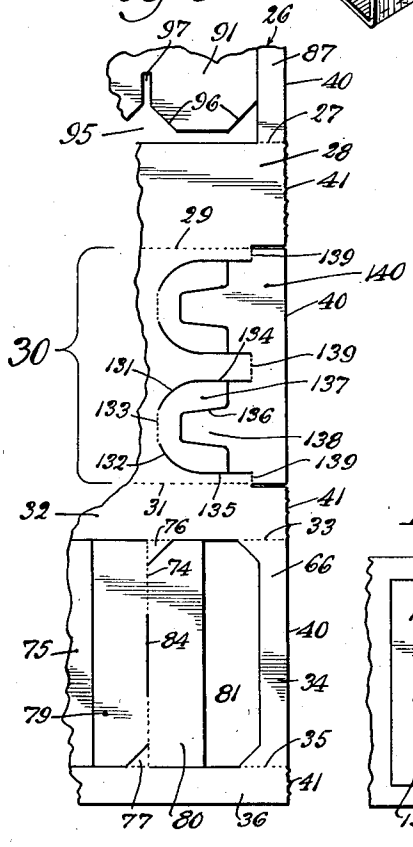


Fig. 7

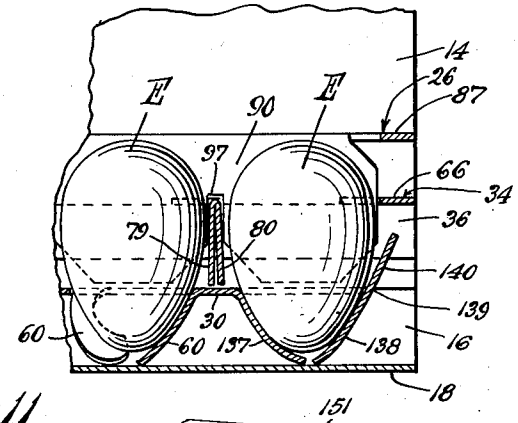


Fig. 11

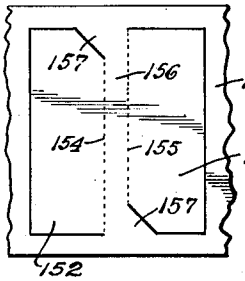
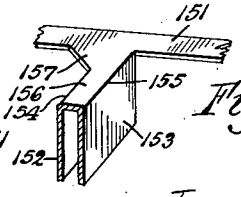


Fig. 12



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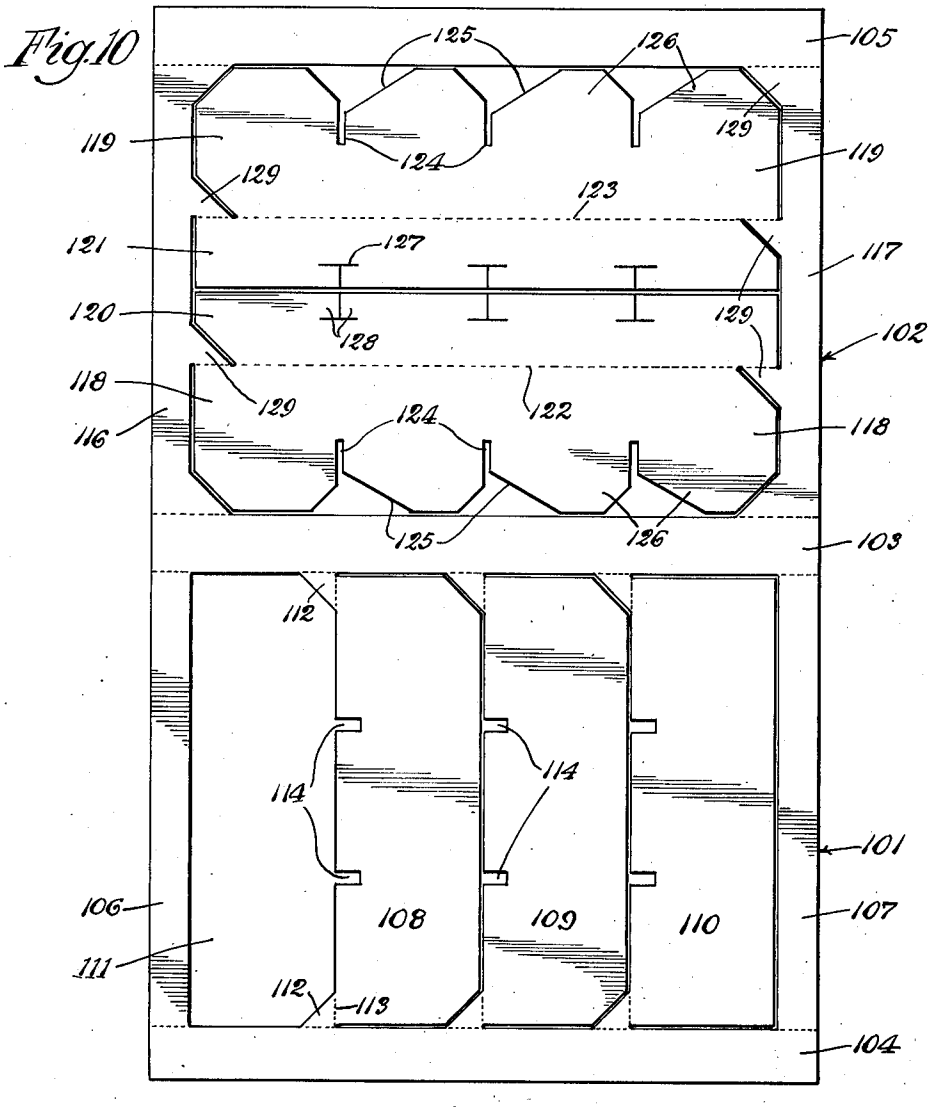
W. Bartlett Jones.

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CELLULAR CARTON AND STRUCTURE THEREFOR

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Fig. 10



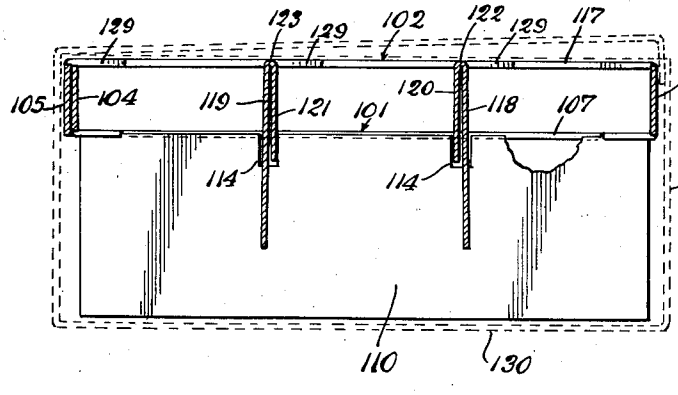


Fig. 9

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UNITED STATES PATENT OFFICE

2,152,649

CELLULAR CARTON AND STRUCTURE THEREFOR

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Application September 28, 1936, Serial No. 102,949

14 Claims. (Cl. 229—29)

The present invention relates to cell-forming structures or cartons, such for example as are useful for eggs or small garden plants, Christmas-tree ornaments, bottles and the like.

Articles of the type referred to having crossing or intersecting cell-defining walls or partitions are commonly made of separate pieces for the partitions. Sometimes, as in egg cartons such cells are defined by stock made of a single sheet which is cut and folded to provide a series of parallel walls, and an intersecting wall which is a reversely bent double thickness of such sheet.

The present invention provides an improved structure for defining cells by crossing walls, characterized by use of two superposed sheets, one cut to provide one or more flaps foldable to one or more cell-walls, and the other cut to provide one or more flaps foldable to provide one or more walls which cross or intersect one or more of the first mentioned walls.

A particular object of the invention is to provide a flat-foldable structure which may be opened, with parts therein foldable to provide crossing or intersecting cell walls.

A further object of the invention is to provide a practical egg carton embodying the principal features of the invention in a practical structure in such a way as to avoid the obstructing effect of certain issued patents. To this end certain structures and cooperating parts are adopted and combined in a useful way even though other constructions might be more advantageous or available except for said certain patents.

A particular object of the invention is the production of an egg carton of the 2x6 cell-type which is divisible into two sections of 2x3 cell-type, without infringing certain patents, and to this end there are used certain features which cooperate to provide a practical and non-infringing structure.

Various other and ancillary objects and advantages of the invention and of certain features or constructions employed will be readily understood from the following description and explanation of the cartons, fillers, structures, and features shown in the accompanying drawings in which:

Fig. 1 represents a two-piece blank with the details of the inner structure omitted, said blank being capable of folding by rolling action to form a flat-foldable egg carton.

Fig. 2 represents the portion of the blank of Fig. 1 which is cut and scored to provide the inner structure of the egg carton with intersecting partitions forming egg cells.

Fig. 3 is a plan view of the open set-up carton, being a plan view of the carton in position as shown in Fig. 4.

Fig. 4 is a cross-section of the carton taken on the line 4—4 of Fig. 3 showing the relation of the parts in set-up position.

Fig. 5 is a longitudinal section of the carton taken on line 5—5 of Fig. 3 showing eggs in place to indicate the cushioning action of the egg rack.

Fig. 6 is a modified form of egg rack and cushion.

Fig. 7 is a view showing the modified form of Fig. 6 as it functions in set-up relation.

Fig. 8 is a modified form of the invention in cell forming structures wherein more than one crossing and intersecting partition is used with a plurality of cross-partitions.

Fig. 9 is a view of the structure shown in Fig. 8 as it may be set into a carton or a box to form cells taken on line 9—9 of Fig. 8.

Fig. 10 is a single sheet blank which may be cut and folded to form the structure of Fig. 8.

Fig. 11 shows a modified blank construction for hinged-together flaps.

Fig. 12 shows a cross-section of the structure folded from the blank of Fig. 11.

The numerous advantages of the present invention are well exemplified when the invention is embodied in an egg carton, and therefore the invention is more specifically described by reference to such embodiment. Other modifications are referred to, and also there are given ancillary structures which pertain to the egg carton embodiment. Egg cartons commercially used today partake of various structures which form cellular boxes of the 2x6 size. Some are made divisible into two 2x3 sizes. The present invention is therefore set forth specifically in such a divisible egg carton.

The invention utilizes an old type of structure to provide a series of parallel transverse vertical partitions. These are made by cutting a series of foldable flaps in a panel, with connecting and carrying tabs. This type of structure is represented in U. S. Carter Patent No. 927,488. Where the depth of the partition is close to the width of the formed cells, the flaps are contiguous, as in Carter, and the partitions are of one thickness. Another type of flap is shown in Scotcher U. S. Patent No. 1,614,972, wherein the partition is made of two flaps hinged together, thus to provide a double-thickness cross-partition. This structure however sacrifices some of the depth in the partition. The present invention may utilize these types of structures for the series of cross-partitions.

In the Scotcher type of egg carton the 2x6 carton is divisible lengthwise into two 1x6 sections. Hence the cross partitions are not intersected by a longitudinal dividing partition. In the Carter patent the 2x6 carton is not divisible, but the cross partitions are intersected by a removable separate strip which is commonly used today and which is usually thicker and more rigid than the stock of the carton and cross partitions.

The Carter structure in its blank form provides a practically straight edge at one side of the blank which forms an end of the folded carton. When half of the cells are omitted in a Carter structure and a "mirror-image" of the blank is attached to this side by a weakened line of attachment, such as shown in Purchas U. S. Patent No. 802,884, a 2x6 divisible carton providing two 2x3 sections is obtained. Such a structure is illustrated in Sugarman U. S. Patent No. Re. 19,030, in which the separate longitudinal partition is provided in two units, one for each section. Such a structure on breaking provides two sections substantially identical with a small Carter carton, each having a cross partition at the end to hold the eggs in place.

In many egg cartons in use today and disclosed in issued patents there is one more cross-partition than there are egg cells between them in order to provide a cross-wall at each end of the carton. Where the carton is made divisible into two complete sections, there must be two more cross-partitions than there are egg cells between them, in order that the severed end of each section has a wall. The first case is exemplified by the said Carter U. S. Patent No. 927,488 in which the flat blank has one edge formed with a projecting area of material to provide an end cross-wall. The second case is exemplified by the divisible carton of Sugarman U. S. Patent Re. 19,030, in which the flat blank has two opposite edges provided each with a projecting area of material to provide the end flaps of the undivided carton. These projecting flaps are troublesome in manufacture of cartons, since perfectly rectangular blanks are not permitted. It is a custom to stamp the blanks in multiple formation from large sheets and therefore much waste is created, and production lessened, where a rectangular blank cannot be used. For this reason it is economically desirable to omit one end wall for a carton or a section, and this omission creates a problem of finding a suitable structure or a modification of the entire carton in order to provide a carton which has a suitable egg-retaining structure at its end, or at the severed end of a section. The present invention solves this problem.

One disadvantage of these transversely divisible cartons is the provision of the separable longitudinal partition, either one long one, or two short ones. In the present invention a partition is provided which is formed from a panel in much the same way as the cross-partitions are formed from a panel. It may be of single or double thickness, and this character, its size and other features may be limited or dictated by the area of the panel which is available, and by the position and relation of the panel in or to the remainder of the carton structure.

Another important variation in cartons is the depth of the cell. This variation influences the structure of the present invention. The Carter box for example has a deep cell wherein the egg rests on the floor of the carton. An improvement over this provides a false bottom or rack on which the egg sets and through which the end projects without touching the true bottom. Cushion means between the true and false bottoms are provided. Such structures are shown in the Rutledge U. S. Patent No. 1,906,337 and the Bueschel U. S. Patent No. 1,940,292. The present invention may be used in cartons with or without such cushioned bottoms.

Still another important feature in prior art cartons is the integral relation of the parts of the blank whereby practically all of the internal parts and all of the external parts are originally a single sheet or blank, folded ultimately into a flat form, and openable into a structure, into which a separate longitudinal dividing partition is inserted to complete the structure. The present invention is useful in such forms to eliminate the necessity for a separable partition.

The prior art shows many features of structure which may be gathered together and used with the present invention, but because of the claims of issued patents it is not commercially possible to do this to provide many of the simple and desirable forms. It has therefore been made difficult to devise new egg cartons, or to apply the present invention to older cartons. In consequence of this situation it has been necessary to create new forms and combinations which provide a practical and advantageous structure capable of free and economic production, capable of being flat-folded, and capable of being set up with facility, as one piece, to provide a 2x6 egg carton which is simply divisible, if desired, into two complete 2x3 sections.

The egg carton hereinafter particularly described is one solution, by means of the present invention, to the many problems presented to the art by the commercial requirements and by the patent situation.

Fig. 1 represents a blank which is foldable into a complete carton. It may be made in one piece, but it is preferably made in two pieces united to each other at some suitable stage in the manufacture. The division is preferably made to provide a printed blank 10 which provides the outer walls of the finished carton, and a cut-and-scored blank 11 (details in Fig. 2) which provides the internal structure of the carton. Thus the printed blank 10 may be made of stock adapted for printing, and the cut-and-scored blank may be made of different stock suitable for such operations. Other and ancillary economic and manufacturing advantages dictate the preference for a two-piece blank.

The carton made from the blank of Fig. 1 is illustrated in end view in Fig. 4 to show the positions taken by the panels of the flat blank. The various areas utilized are designated by names and even numbers, and the intervening scored lines for folding are designated by odd numbers. By reference to Figs. 1, 2 and 4 the following parts will be found: locking flaps 12, cover 14, rear side wall 16, true bottom 18, front side wall 20, glue strip 24 secured to front side wall 20, topmost inner panel 26, rear glue-strip 28 secured to rear side wall 16, false-bottom or egg-rack 30, front glue strip 32 secured to the glue strip 24 which is itself secured to front side wall 20, intermediate panel or cross-partition-forming-wall 34, and glue strip 36 secured to the rear glue strip 26. The scored lines for folding are designated in the same order by odd numerals from 13 to 35 inclusive.

The above described arrangement is such as to cause the box to be formed into a foldable

parallelogram structure, by a rolling action from the end having glue strip 36, the parts being effectively united by glue or other securing means as the folding and rolling action takes place in manufacture. It is to be recognized that the same structure may be arrived at by different relations of the panels and by different folding, or by building up from several separate pieces.

The false-bottom or egg rack 30 is spaced from the true bottom 18, and is cut to provide holes and cushions for the end of the egg. The edges of the rack or false bottom 30 provide a horizontal bar to hold the eggs. The intermediate panel 34 is spaced away from the false bottom and from the top of the carton, and the flaps which form the partitions are so made that there are left in the panel certain strip-areas the edges of which provide horizontal cross-bars at the ends of the whole carton and of the two sections into which it is divisible. These bars are at a level suitable to support the body of the egg laterally, and to bar its removal endwise of the carton, in the event that the particular construction adopted does not provide a cross-wall or partition for the same purpose, as is the case at the severance line in the carton illustrated. The top-most inner panel is preferably carried to the top of the carton so that the longitudinal partition formed therefrom supports the cover at its center to protect the tops of the eggs, and also to provide a strip of material above the level of the cross-partitions to give rigidity to the longitudinal partition. These relations may be varied, but the reasons for the preferred construction will become apparent as the description proceeds.

An important feature of the invention is the use of the two superposed panels 34 and 26 to provide intersecting or crossing partitions defining cells. The description is generally limited to one-half of the structure shown, it being understood that the division or severance line divides the structure into parts as would a mirror located at the severance line. The division line is a weakening of the carton blank to facilitate division. It is preferably fully cut through the stock at the regions shown in full lines 40 in Figs. 1 and 2, and partly cut through by perforations shown by the dashed-lines 41.

The three panels 30, 34 and 26 will be described in such order, which is upwardly in the completed carton.

The egg rack.—The egg rack or false bottom 30 is cut to provide holes to receive ends of eggs placed in the cells. The cutting is such as to avoid removal of stock, and to leave stock from the hole as a cushioning means. The preferred cushioning effect is to provide angular means spanning the space between the egg rack and the true bottom, on which means the egg rests or is cushioned. Two forms are shown in Fig. 2, one form being specially designed to lift a portion of the area of the rack or false bottom upwardly as an additional lateral obstruction for the egg. This is particularly desirable at the severance line of the illustrated carton, at which line there are no cross walls or partitions, but only a grating formed by the edges of panels 30 and 34.

In the Bueschel U. S. Patent No. 1,940,292 there is shown an egg-hole cushioning form which is here modified to provide the upstanding obstruction. In Fig. 2 two arcuate cut lines 45 and 46 are separated by a space 47, which together form a semi-circle as a part of the egg-hole. The cut lines are extended by the parallel cut lines 48 and 49. A connecting cut line 50 provides a two-fingered tab 51, foldable on dotted line 47. The two fingers of this tab encompass a one-fingered tab 52 which folds on dotted lines 53. A cut line 54 extending away from the egg hole breaks the extent of dotted lines 53 into two portions. When the cut line 54 is semi-circular it forms an upstanding half-moon lug 55 alongside an egg in the egg-hole, as shown in Fig. 5. In this figure the fingers of the tabs rest on the floor or true bottom 18 and cushion the egg. In Fig. 2 the little lug 56 is merely to contact the inner wall of the box and aid in giving support in the righted open position.

The two-fingered tab 51 provides a slight receptacle between its fingers to center the egg, which otherwise might, upon some force to displace it, move in the trough-like region formed by the two tabs. To overcome the existence of such a trough-like passage-way for the egg end, there is used a different form of cushion as shown in other egg holes. For convenience this is called the "pin-wheel" type, and it likewise has a cushioning or mattress effect. It consists merely of more than two tabs cut to define in part the circumference of the egg-hole, and in the immediate form, hinged at the periphery, and preferably outside of the circumference line of a circular opening. Each tab is greater in length from its hinge to its remotest tip than the radius of the hole. Three tabs provide a greater tab-length than four, and hence three are shown as preferred. Each tab 60 has an end 61 which is preferably semi-circular with a diameter extending from the center 62 of the egg-hole to the periphery. The semi-circular cut is extended at 63 to form the circumference of the egg-hole, and terminates short of the next tab to leave folding line 64. The cut line 63 preferably extends to a point outside of the general circle. Such a tab folds at the weakest point, if not scored, and the weakest point may be the narrowest width or near it, according to the grain of the stock. It is preferred to have the folding line outside the circle.

The cross-partition panel.—The panel 34 in principle provides flaps to be folded down according to prior art cartons, but there are some modifications in the nature of improvements. The flaps are so cut as to leave in the plane of the panel strips or ties 65 at the ends of the 2x6 carton, and strips or ties 66 on each side of the severance line. These form cross bars as egg obstructions, effective on the egg at a large diameter of the egg, and hence effectively remote from the egg end. Adjacent the bar 65 and attached to it to fold on line 67, is the carton end-flap or cross-wall or partition 68. Triangular tabs 69 and 70 are left at the rear and front respectively as reinforcements for the strip. The edge of flap 68 is defined by cut line 72 which also defines the edge of the next flap 73. This folds on line 74 on which the next flap in order 75 also folds forming two "hinged-together" flaps. Part of flap 73 is cut to provide the carrying triangle 76 on one side of line 74 and part of flap 75 similarly provides carrying triangle 77 on the other side of the hinge-line 74. Flap 75 has its edge formed by cut 78 on the other side of which flaps 79 and 80 are formed in the same way as the hinged-together flaps 73–75. In the present embodiment no flap is shown at the severance line, but one may readily be employed to duplicate flap 68, when this is desired. In the absence of such partition or wall at the severed end of a section, the cross-bar 56 and the egg-hole lug

55 serve as egg-retaining means above the level of the egg rack. By omitting the flaps at the division line, the only removal of stock from panel 34 is at the areas 81 and 82 which otherwise would provide the material for the flaps omitted. The folding lines 67 and 74 are partially cut through at 84 to remove stiffness or resistance in setting up operations.

The longitudinal partition panel.—The topmost panel 26 is cut to provide ties or strips 86 at the ends of the carton and similar ties 87 for each section at the severance line. In Fig. 2, it is to be noted that panel 26 is viewed from its underside, as indicated by the legends "Rear" on glue strip 28 and "Front" (which is an inverted legend) on glue strip 24. Upon folding the blank these legends will read in normal position. The ties 86 and 87 are provided at the front of the carton with reinforcing triangular tabs 88 which cooperate with slots 89 in the two portions of locking flaps 12 (Fig. 1). Thus each section has its cover locked at each end of each section.

Each section has two hinged-together flaps 90 and 91 carried by ties 86 and 87 and foldable on scored line 92. Triangular tabs 93 and 94 on opposite sides of the folding line are provided by material taken from the respective flaps 90 and 91. The width of the carton shown permits each flap 90 and 91 to be of sufficient length to touch or nearly touch the false bottom or egg rack 30, with a little material to spare. Hence the spare material in area 95 is removed along with connected triangular pieces which provide bevelled corners 96 and slots 97, which together contact and receive the cross-flaps in the panel 34 as they are or become cross-partitions. On the rear side an additional area is included to form finger-hole 98, the use of which will be described later in reference to setting-up operations. The slots 97 terminate so that their ends rest upon the tops of the cross-walls and support the longitudinal partition in level relation with the top of the carton.

Folding and setting up.—In making a carton from the parts described, a blank as in Fig. 1, cut as in Fig. 2, and scored on the folding lines, is bent first on line 33, downward in Fig. 1, and then folded in the same direction on line 29. This brings glue strip 41 onto glue strip 28. These strips are secured, preferably by glue in this position. Then the line 25 is folded upon in the same direction, bringing glue strip 24 onto glue strip 32 (see Fig. 4). These are secured by glue. Then the blank is folded again on line 17, bringing glue strip 28 onto rear side wall 16, to which it is glued. The carton is then flat-folded with 6 and less thicknesses of stock.

The carton is then opened by use of the flexibility of the parallelogram cross-section in its various parts. When in squared position it presents a tube form of rectangular cross-section with parallel crossing panels 30 and 34 on the interior. The appearance of the top is then the same as the panel 26 appears in Fig. 2. The inner structure is quite invisible. It may be set up in numerous ways. A forefinger may be set into finger hole 98 at the rear, and a thumb into a recess on the opposite side. The panel being flat has a tendency to buckle or bend inwardly, but by grasping the flap edges as indicated this is prevented, while proper manipulation is used to bend the two flaps 90 and 91 downward to form a double thickness wall or partition which crosses the positions of the underlying cross-partitions which may still be in panel form or in wholly or partly folded-down position. The ties 86 and 87 in the top most panel may flex upwardly and raise the folded edge 92 above the level of the carton proper, causing downward pressure of the bevelled sections of the longitudinal double-walled partition to rest upon the swingable areas of the flaps in the intermediate panel 34. This bends them down toward the vertical position. From this partial setting of the cross-partitions two easy procedures are possible. Additional pressure downward on the double-walled longitudinal partition will cam the cross-partitions into their vertical positions. The other way is to drop in the eggs and let the eggs cam the cross-partitions into place. After the eggs are inserted the cover is shut down and this presses the longitudinal partition down from crossing to intersecting relation, wherein the slots 97 receive and hold the double-walled crosspartitions. In locking, the cover is flexed and its edge slides on ties 86 and 87 while the locking flaps 12 in bent-down position are allowed to slide between the ties 86 and 87 of the topmost panel. Thus the slots 89 in the locking strips ride over the edges of triangles 88. A particular advantage of the double cross-walls and double longitudinal partition is the lateral pressure exerted on the eggs when the double walls may be somewhat spread apart.

A quick method of setting up is to insert the fingers down along the inside of one side wall, flexing the top flap 90 or 91 downward, which brings upwardly the other top flap. The fingers partially fold down the cross-partitions. Then the longitudinal partition is formed and pushed down, completing the box. A simple machine has been devised to set up the cell-structure in one operation.

Filler structures.—The invention is not limited to the uses exemplified above in an egg carton, but may be used in other ways. Particularly, the panel which forms the longitudinal partition in the egg carton may be wider and be cut to form a plurality of spaced partitions, such for example as will form a filler for a 3x4 sized egg box. The chosen dimensions may compel use of a single thickness for such partition, or partitions which are partly of double thickness, as shown in Figs. 8 to 10.

A suitable cell-forming filler for a box is shown in blank form in Fig. 10. It has panel 101 providing one series of attached foldable flaps, and panel 102 providing a set of attached flaps foldable to cross the first series. The blank has a connecting strip 103 to space the panels apart, and two other spacing strips 104 and 105 which are secured together, forming a parallelogram structure which is flat-foldable before the panel flaps are folded away from their panels.

Panel 101 is cut to leave end ties or strips 106 and 107, and to provide flaps 108, 109 and 110. A blank space 111 is formed where only three flaps are produced, but this space may be used if an additional flap is desired. The flaps are attached by the conventional triangular tabs 112 and fold on dotted lines 113. Each flap is slotted at 114 where it is to be crossed by flaps from the other panel, to provide an intersecting relation.

Panel 102 is cut to leave end ties or strips 116 and 117, and to provide two wide flaps 118 and 119, and two narrow flaps 120 and 121. Flaps 118 and 120 are hinged together on line 122, and flaps 119 and 121 are hinged together on line 123. When folded on these lines they form partitions which are in part of double thickness. The wide

flaps 118 and 119 are slotted at 124 to interlock with slots 114 in the other set of flaps or walls. The ends of the sections between slots 124 are bevelled slightly at 125, especially to form the remote tips 126 to one side of the folding lines 113 of the crossed flaps, thus forming a sort of cam to bend flaps 108, 109 and 110 down, as flaps 118 and 119 are turned down.

The narrow flaps 120 and 121 are not slotted, but are provided with a T-shaped cut 127. This provides tabs which can flex to admit the edges of flaps 108 and 110. The tabs 128 formed by cut 127 pinch the cross-partitions until the slots 114 are reached, and thereafter they lock the partition in place. The supporting triangles for the flaps are designated 129.

The structure above described can be made with any number of partitions in either panel, and it may be independent of box walls as shown, to be inserted in a box represented by dotted lines 130 in Fig. 9, or it may be included with carton walls as described with reference to the 2x6 egg carton.

The panels from which the crossing walls are cut, are preferably spaced apart, where all flaps fold in the same direction, but it is to be understood that the spacing may be varied or omitted, and that the flaps may fold in any direction to form crossing partitions rather than to form intersecting partitions.

Modified egg-rack cushion.—In Figs. 6 and 7 the egg cushion structure is shown combined with a flap structure, so that when eggs are inserted into egg holes, a flap is raised above the egg-rack level as an added lateral obstruction. The modification may be used at the end of a carton or section, and is shown at the end of a section in the egg carton of Figs. 1 to 5 and at the severance lines where there is no cross-wall from the intermediate panel. In Fig. 6 parts corresponding to Fig. 2 are similarly designated, the line at the right in the drawings representing the severed end of a section.

The two end egg-holes are formed by arcuate cuts 131 and 132 separated by attaching and folding space 133. These together define a semi-circle for the egg-hole. The cuts 131 and 132 are extended by parallel cut lines 134 and 135, which are cross-connected by the jagged cut line 136 to provide a two-fingered tab 137 and an interfitting one-fingered tab 138. The whole egg-rack panel is scored across at the lineal positions 139 at the ends of the parallel cuts 134 and 135. The folding lines 29 and 31 of the egg-rack are cut from the section or carton end, illustrated as the severance line 40, inwardly to the scored folding line 139. Thus the two one-fingered tabs 138 are integral in the plane of an end flap 140, thus formed. As the eggs E move the one-fingered tabs 138 down, the panel material pivots on line 139 and raises flap 140 to the position best shown in Fig. 7. The integral tabs or flaps thus bent form a baffle for the egg in the egg-hole.

Modified hinged-together flaps.—In commercial egg cartons space is at a premium, commercially compelling the double walled partitions to be close together as shown. However, the construction is subject to modification when desirable, to give an improved appearance or added strength against flexing. The double-thickness walls shown will flex, but these may be rigidified by a channel-form of construction shown in Figs. 11 and 12.

Any panel area 151 in which flaps 152 and 153 are struck out to form a double partition, may have two folding lines 154 and 155 separated by a hinging strip 156. Out of each flap may be cut at least one reinforcing triangle 157 for the strip and wall which is formed by the flaps on folding. The strip 156 is sufficiently narrow to bring the flaps close together as a double wall, and hence this structure is contemplated where "hinged-together" flaps are referred to.

The invention is not to be considered as limited to the structures shown and described, and various changes and combinations are contemplated as falling within the invention as defined in the appended claims.

I claim:

1. A cellular carton for eggs and the like comprising a bottom wall, and two opposite side walls, an internal panel secured to the side walls parallel to and above the bottom, said panel being cut to provide attached folded-down vertical cross-partitions at right angles to the side walls, and a second horizontal panel secured to the side walls above said internal panel, the second panel being cut to provide an attached folded-down vertical partition parallel to said side walls, said partition being slotted to receive edges of cross-partitions in an intersecting relation forming cells.

2. A cellular carton for eggs and the like comprising a bottom wall, and two opposite side walls, an internal panel secured to the side walls parallel to and above the bottom, said panel being cut to provide attached folded-down vertical cross-partitions at right angles to the side walls, and a second horizontal panel secured to the side walls above said internal panel, the second panel being cut to provide attached folded-down partitions parallel to the side walls and crossing one or more of the cross-partitions forming cells.

3. A cell-forming structure comprising two superposed spanning panels each cut to provide one or more attached flaps cut from an area between the ends of the spanning panel and carried by the panel by a hinging connection, each flap being foldable into position angular to the panel providing the flap, a folded flap from one panel crossing a folded flap from the other panel, thus defining cells.

4. A cell-forming structure comprising two superposed spanning panels, means for securing them together in spaced relation, each panel being cut to provide one or more attached flaps cut from an area between the ends of the spanning panel and carried by the panel by a hinging connection, each flap being foldable into position angular to the panel providing the flap, a folded flap from one panel crossing a folded flap from the other panel, thus defining cells.

5. A cell-forming structure comprising two superposed spanning panels each cut to provide one or more attached flaps cut from an area between the ends of the spanning panel and carried by the panel by a hinging connection, each flap being foldable into position substantially perpendicular to the panel providing the flap, a folded flap from one panel perpendicularly crossing a folded flap from the other panel, one or more of the crossing flaps being slotted and positioned to provide an intersecting relation for defining the corners of cells.

6. A cell-forming structure comprising two superposed spanning panels, means to secure the panels in spaced relation, the first panel being cut to provide one or more attached flaps cut from an area between the ends of the spanning

panel and carried by the panel by a hinging connection, each flap being foldable away from the second panel into position substantially perpendicular to the first panel, the second panel being cut to provide one or more flaps foldable toward the first panel into positions intersecting one or more folded flaps from the first panel, a flap of the second panel being slotted to encompass the sides of each intersected flap of the first panel.

7. A cell-forming structure comprising two superposed spanning panels, means to space the panels apart, the first panel being cut to provide two attached and hinged-together flaps cut from an area between the ends of the spanning panel and carried by the panel by a hinging connection, each flap being foldable away from the first panel to form a double wall angular to the first panel, and the second panel being cut to provide an attached flap cut from an area between the ends of the panel and carried by the panel by a hinging connection and foldable away from the second panel, said last mentioned flap when folded crossing the direction of the double wall.

8. A cell-forming structure comprising two superposed spanning panels, means to space the panels apart, the first panel being cut to provide two attached and hinged-together flaps cut from an area between the ends of the spanning panel and carried by the panel by a hinging connection, each flap being foldable away from the first panel to form a double wall angular to the first panel, and the second panel being cut to provide an attached flap cut from an area between the ends of the panel and carried by the panel by a hinging connection and foldable away from the second panel into a position intersecting the double wall and being recessed from an edge when folded to encompass the double wall in intersecting relation.

9. A cell-forming structure comprising two superposed spanning panels, means to space the panels apart, the first panel being cut to provide one or more attached flaps cut from an area between the ends of the spanning panel and carried by the panel by a hinging connection, each flap being foldable away from the first panel, the second panel being cut to provide attached and hinged-together flaps cut from an area between the ends of the panel and carried by the panel by a hinging connection and foldable to provide a double wall extending toward a folded flap of the first panel in intersecting relation therewith.

10. A cell-forming structure comprising two superposed spanning panels, the first panel being cut to provide a set of two hinged-together flaps cut from an area between the ends of the spanning panel and carried by the panel by a hinging connection, each flap being foldable away from the panel area to form a double-wall attached to the first panel, the second panel being cut to provide a set of two hinged-together flaps cut from an area between the ends of the panel and carried by the panel by a hinging connection and foldable away from the panel to form a double-wall attached to the second panel, the two sets of flaps being located in their originating panels so that in folded positions as walls the planes of the flaps crossing so as to define at least a portion of a cell structure.

11. A flat-foldable cell-forming structure comprising two spanning panels, linking means connecting the panels together in flexible parallelogram formation for folding to flat-wise position, the first panel being cut to provide one or more attached flaps cut from an area between the ends of the spanning panel and carried by the panel by a hinging connection, each flap being foldable out of the panel to form one or more attached walls, and the second panel being cut to provide one or more attached flaps foldable out of the panel to form one or more attached walls of which at least one wall crosses one or more walls attached to the first panel.

12. A flat-foldable cell-forming structure comprising two spanning panels, linking means connecting the panels together in flexible parallelogram formation for folding to flat-wise position, the first panel being cut to provide one or more attached flaps cut from an area between the ends of the spanning panel and carried by the panel by a hinging connection, each flap being foldable out of the panel to form one or more attached walls, and the second panel being cut to provide one or more attached flaps foldable out of the panel to form one or more attached walls of which at least one wall crosses one or more walls attached to the first panel, each said crossing wall of the second panel being recessed from an edge to encompass each wall crossed, whereby to provide intersecting walls in part defining cells.

13. A cellular carton for eggs and the like which is foldable flat, comprising essentially three superposed panels of similar size one of which provides a bottom support for eggs, another of which provides cell-partition means in one direction, and the other of which provides cell-partition means in a cross-direction, linkage walls forming carton sides connecting the three panels in spaced relation in a flexible parallelogram structure capable of being folded flat, the panel immediately above the bottom support being cut to provide a series of attached flaps foldable out of the panel to provide parallel partitions above and at right angles to the bottom support, and the top-most panel being cut to provide one or more attached flaps foldable out of the panel into intersecting relation with at least one of the flaps in the series of parallel partitions, each intersecting flap of the top-most panel being recessed from an edge to receive the intersected flap of the intermediate panel.

14. A cellular egg carton having a tubular cross-section comprising a continuous extent of material rolled into tube form from end to end and folded in the same direction to provide a parallelogram structure having front and rear side walls and inner strips secured to said side walls, having a bottom, and a cover hinged to one side wall, and having three spaced interior crossing panels parallel to the bottom and cover, the lower interior panel providing an elevated egg-rack, the intermediate interior panel providing flaps foldable down to form spaced cross-partitions, and the topmost interior panel providing at least one flap foldable down to form a longitudinal partition dividing the space between two cross-partitions into two egg-cells.

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