Aug. 8, 1961 V. E. SWANSON 2,995,289

EGG CARTON

Filed April 9, 1959 2 Sheets-Sheet 1

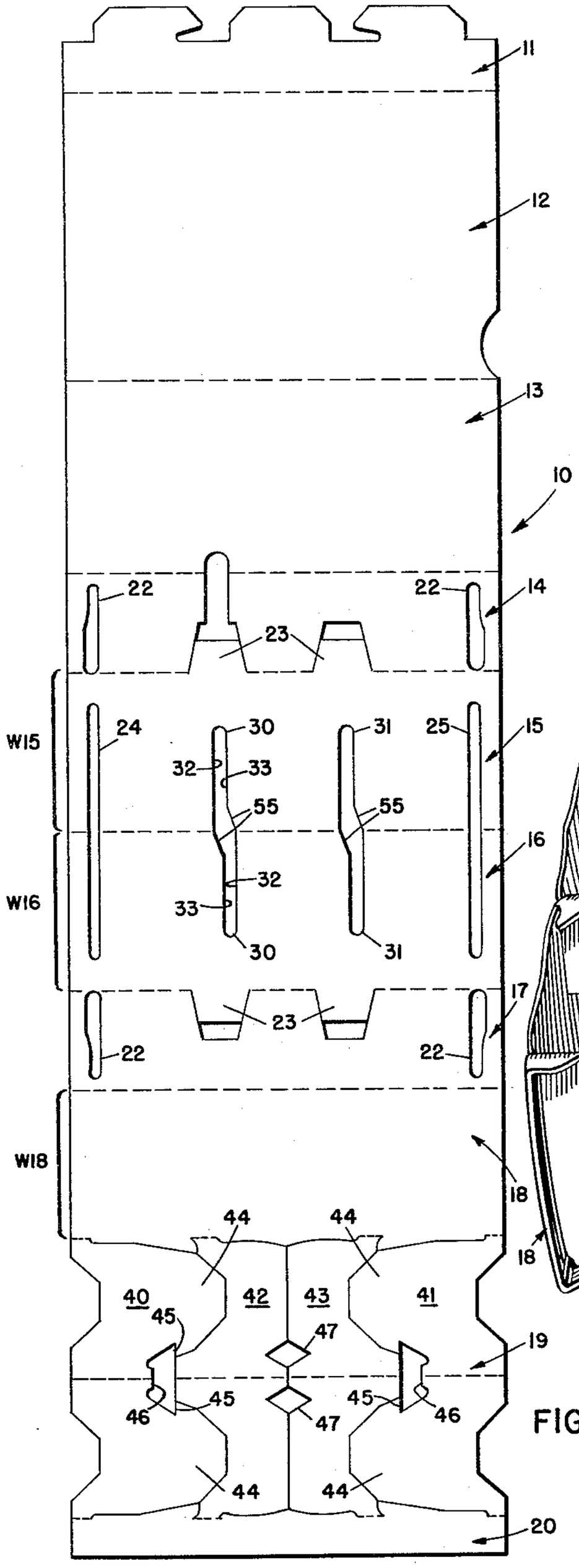

FIG. 1

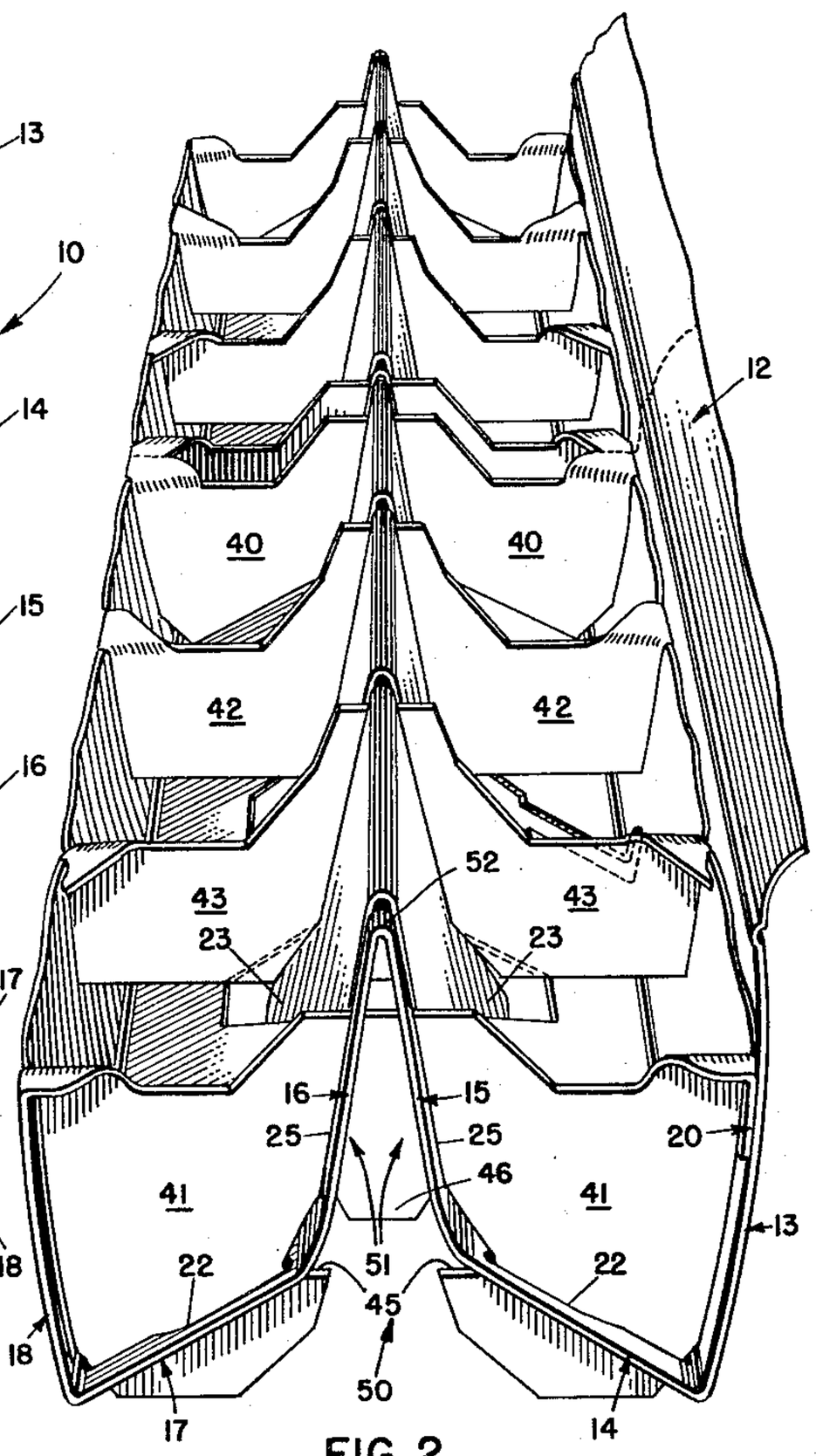

FIG. 2

INVENTOR

Vernon E. Swanson

BY

Karl O. Flocks

ATTORNEY

Aug. 8, 1961 V. E. SWANSON 2,995,289

EGG CARTON

Filed April 9, 1959 2 Sheets-Sheet 2

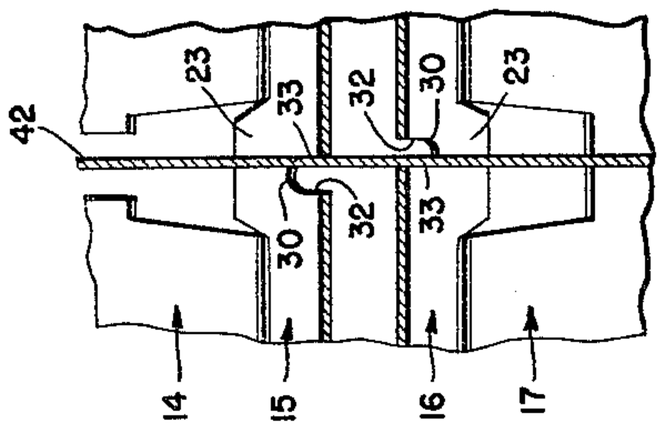

FIG. 7

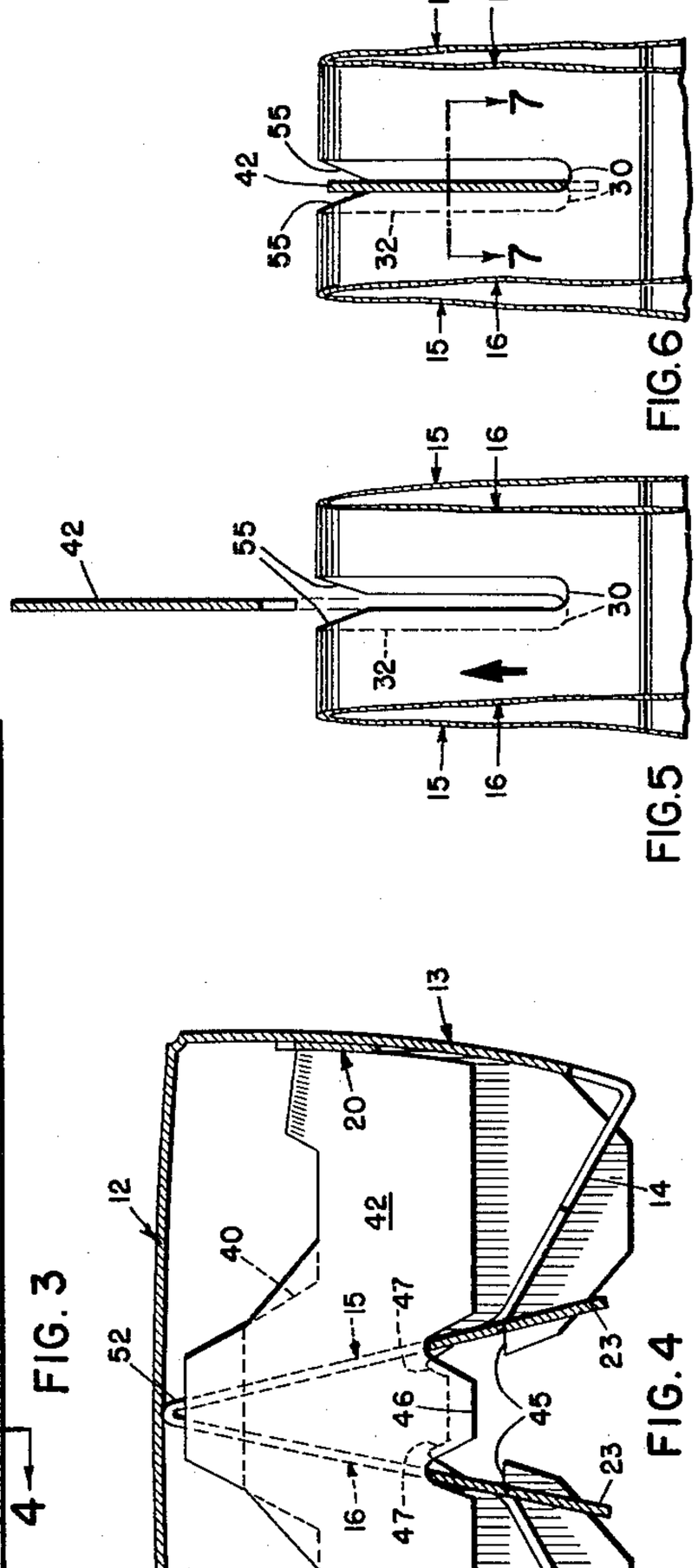

FIG. 6

FIG. 5

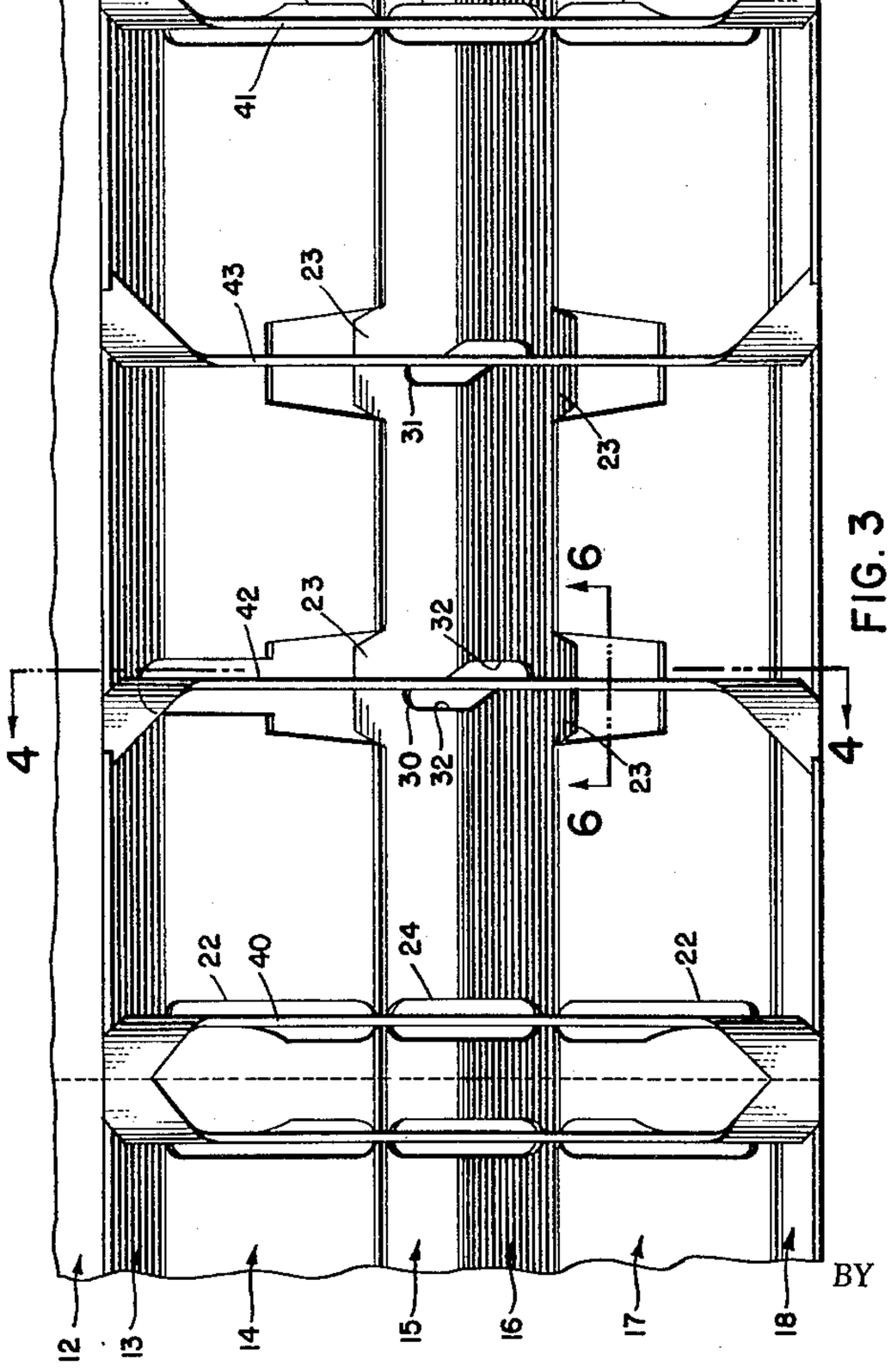

FIG. 3

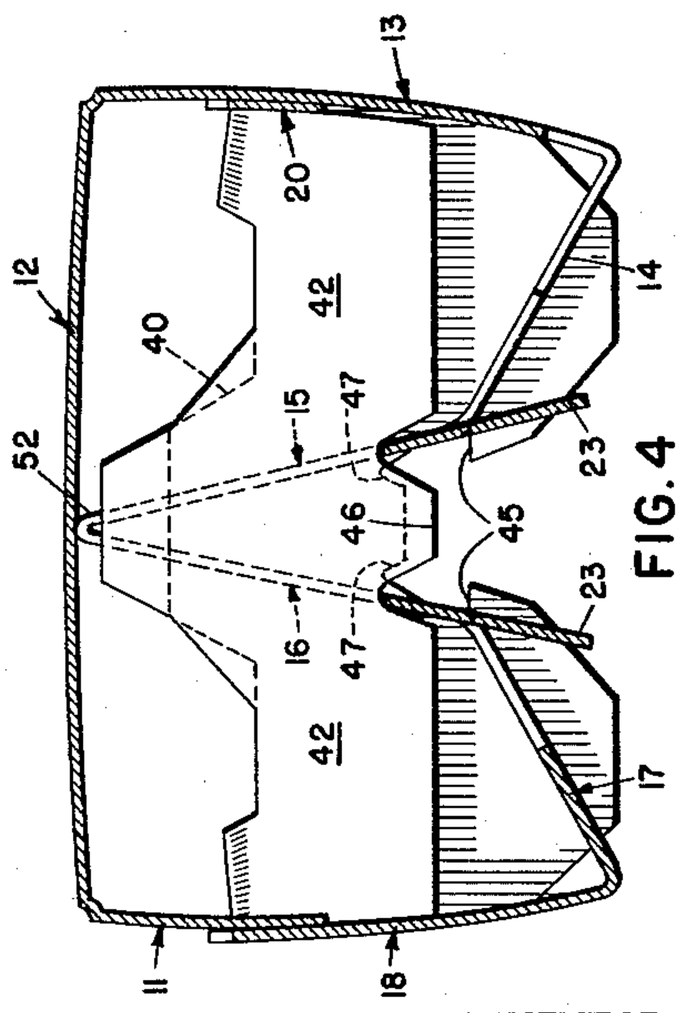

FIG. 4

INVENTOR

Vernon E. Swanson

BY

KARL W. FLOCKS

ATTORNEY

United States Patent Office

2,995,289
Patented Aug. 8, 1961

2,995,289

EGG CARTON

Vernon E. Swanson, Chicago, Ill., assignor to Diamond National Corporation, a corporation of Delaware

Filed Apr. 9, 1959, Ser. No. 805,186
10 Claims. (Cl. 229—28)

The present invention relates to a one piece paperboard egg carton, and more particularly to such an egg carton having a high longitudinal partition with narrow, bell-mouthed slots therein for receiving the transverse partition.

Egg cartons have long been provided which are made of paperboard and which are compartmented so that there are a number of cells, each receiving an individual egg. These egg cartons are typically made so that they are in the form of a rather narrow rectangle, having two longitudinal rows of six egg receiving cells. While there have been many variations proposed, at least two general styles may be recognized in which there are provided front and back walls, a cover and a bottom. One of these styles has two thicknesses of paperboard extending longitudinally of the carton, thus to divide the front row of cells from the back row of cells and this longitudinal partition had the two thicknesses of paperboard in contact with each other, the longitudinal partition thus formed rising from approximately the bottom or lower level of the carton to approximately the upper level thereof. The other style had what is known as an inverted V bottom, so that the longitudinal partition structure consisted of two piles, usually integrally joined at their apex, and diverging outwardly and downwardly from this apex to integrally join with the bottom structure of the carton.

In the attempts of the art to obtain maximum economy of paperboard material, it was soon recognized that the inverted V bottom style consumed less paperboard for a given carton than the other style mentioned, and so great attention was given to this inverted V style carton. Initially, the apex of the inverted V of the longitudinal partition was placed directly underneath and in contact with the underside of the cover panel of the carton. As the art developed. this construction was considered to be somewhat wasteful of paperboard, and so the apex of the inverted V of the longitudinal partition was lowered so that it extended only about two-thirds of the way upwards to the cover panel. Subsequent to this, there came the development of erecting these cartons by automatic machinery and these cartons were very amenable to such erection. It will be understood that as the marketing of eggs took place on ever larger scales, the hand erection of cartons, shipped in knocked down condition to conserve space, was uneconomical, this fact creating the demand for the automatic erection machine.

For purposes of economy, among others, the manufacture of the paperboard egg cartons began with the die cutting of suitable blanks, and these blanks were folded over along a transverse fold line and a glue flap caused to adhere to an intermediate panel by means of suitably applied adhesive. There was thus formed a flattened tube, and one part of the tube was destined to become the longitudinal partition structure of the inverted V configuration and another part of the tube was destined to become the transverse partitions. The transverse partitions were located, in a known instance, in a single panel, and the automatic erecting machinery first opened up the tube, then rotated the transverse partitions through 90°, and finally "tucked" the inverted V bottom longitudinal partition so that it extended upwardly, rather than forming the bottom bight of the tube construction. As an example of such automatic machinery, reference is made to Jordan Patent No. 2,700,922 dated February 1, 1955.

While the above described machinery has operated

quite satisfactorily, and while the economical inverted V bottom cartons have generally proven acceptable, as the demand for more and more rapid handling of the eggs when packaged in the cartons has developed, it has been found that a certain amount of egg breakage has occurred with these cartons.

In particular, it has been found that the above-mentioned egg breakage has occurred, in part, from the ability of the eggs to strike each other during jostling of the carton because the low and economical longitudinal partition failed to keep them separated under such conditions. And while it was true that the prior art has teachings therein of egg cartons with relatively higher longitudinal partitions, the prior art did not teach the solution that was necessary, vis., a high longitudinal partition carton that could be readily erected with rapidly operating automatic erecting machines.

An object of the present invention is to provide an egg carton made of a one piece paperboard blank which prevents contact of eggs in adjacent cells and which may be readily erected in rapidly operating automatic machines.

Another object of the present invention is the provision of an egg carton made from a single blank of paperboard, which egg carton provides for complete separation between the two longitudinal rows of eggs and which holds intermediate cross partitions in each of two sections thereof in substantial vertical alignment.

Other objects and the nature and advantages of the instant invention will be apparent from the following description taken in conjunction with the accompanying drawings wherein:

FIG. 1 is a plan view of one symmetrical half of a blank for an egg carton in accordance with the present invention;

FIG. 2 is a perspective view of a carton in accordance with the present invention, with parts broken away;

FIG. 3 is a top plan view of the carton shown in FIG. 2, with parts broken away;

FIG. 4 is a cross sectional view taken on the line 4—4 of FIG. 3;

FIG. 5 is a partial view of the carton viewing the erection thereof and showing the position that certain parts would take when the carton is being erected by automatic machinery;

FIG. 6 is a partial cross-sectional view taken on the line 6—6 of FIG. 3;

FIG. 7 is a cross-sectional view taken on the line 7—7 of FIG. 6.

Referring now to the drawings, wherein like reference characters are used to designate like or corresponding parts throughout the several views, there is shown in FIG. 1 a blank 10 that is in fact one symmetrical half of a blank used for erecting the carton of the present invention. It will be understood that the blank 10 will erect a six cell unit, and that the completed blank, when erected, will have two such units therein which may conveniently be broken apart along a score line to thereby separate the carton into two units of six eggs each. The blank 10 presents, in order, a tuck flap 11, a cover panel 12, a back panel 13, a bottom panel 14, a pair of longtudinal partition panels 15 and 16, a second bottom panel 17, a front panel 18, a cross partition panel 19, and a glue flap 20. As is conventional, the solid lines represent cuts and margins, and the dotted lines represent score lines or folds. It may therefore be seen that each of the above-mentioned panels and flaps is separated from the adjoining panel or flap by a score line, and that the blank will ultimately be folded at each of the score lines except at a score line 19′ extending centrally across the partition panel 19. However, this fold line will give the carton resiliency and strength when subject to pressure applied

to the front or back panels when the carton is erected, as will subsequently become apparent.

The bottom panels **14** and **17** each have a pair of transversely extending slots **22** therein adjacent the lateral margins thereof. Each of the bottom panels **14** and **17** also have a pair of spaced feet lugs **23** severed therefrom on three sides and integrally joined to the adjacent longitudinal partition panel. Hence, the feet lugs **23** in bottom panel **14** are integrally joined to the longitudinal partition panel **15** and the feet lugs **23** in the bottom panel **17** are integrally joined to the longtudinal partition panel **16**.

The longitudinal partition panels **15** and **16** have a transversely extending slot **24** near the left margin thereof and a similar transversely extending slot **25** near the right margin thereof. The slots **24** and **25** are end slots, and extend substantially continuously from adjacent the fold line between bottom panel **14** and longitudinal partition panel **15** to adjacent the fold line between bottom panel **17** and longitudinal partition panel **16**.

Each of the longitudinal partition panels **15** and **16** has a pair of intermediate slots **30** and **31** therein. Each of the intermediate slots **30**, **31** are identical in construction, and each is defined by a first margin **32** that extends transversely from the fold line between the longitudinal partition panels **15** and **16**, and by a second margin **33** that is spaced from the first margin **32** and extends from the aforementioned fold line at an angle towards the first margin **32**, and thence in parallel relationship thereto. Further, the first margin **32** of an intermediate slot **30**, **31** in one of the longitudinal partition panels **15**, **16** is joined to the second margin **33** of an intermediate slot in the other one of the longitudinal partition panels **15**, **16**, it being noted that these second margins **33** are in linear alignment. Hence, the slots present a configuration that is generally zig-zag, and which has a relatively wide connecting part at the fold line between the partion panels **15** and **16**.

The cross partition panel **19**, which may be seen to have a fold line thereacross, comprises a pair of full depth cross partitions **40** and **41** and a pair of shallow depth cross partitions **42** and **43** therebetween. The full depth cross partitions **40** and **41** each has a pair of spaced extensions **44**, and these extensions **44** have hooks **45** thereon, the hooks **45** facing each other. Between the hooks **45** there is a pendent portion **46**. Each of the shallow depth cross partitions **42** and **43** has a pair of spaced triangular apertures **47** which is located at the margin of the partition that is adjacent the other one of the shallow depth cross partitions.

It will be observed that the width **W15** of longitudinal partition panel **15** is equal to the width **W16** of longitudinal partition panel **16**, and is greater than the width **W18** of the front panel **18**.

Referring now to FIG. 2, there may be seen a perspective view of a carton erected from the blank **10** shown in FIG. 1. The carton, generally designated **50**, may be seen to have a front **18** and a back **13** and a cover **12** integrally joined to the back **13**. In the closed condition of the carton, shown in FIG. 4, the cover **12** extends forwardly in a generally horizontal plane to the front **18**, and is held in this position by engagement of the tuck flap **11** with parts of the transverse partition structure. The carton **50** also has a longitudinally extending bottom and partition structure, generally designated **51** and this structure **51** may be seen to be integral with the front **18** and back **13** and to comprise the gently sloping bottoms **14** and **17** which are integrally and hingedly joined to the lower margins of the back **13** and front **18**, respectively. Integrally joined to the other margins of the bottoms **14** and **17** is a pair of sharply rising longitudinal partition panels **15** and **16**, these panels extending upwardly to an apex at **52**. As may be seen from FIG. 4, the apex **52** underlies and is in contact with the underside of the cover **12**. There may also be seen in FIG. 2 the shallow depth cross partitions **42** and **43** extending through the partition panels **15** and **16**, and joined to the front **18**, and to the back **13** by the glue flap **20**.

In FIG. 3, there may be seen the apex **52** extending between and generally parallel to the back **13** and the front **18**. There are also shown the full depth transverse partitions **40** and **41** and the shallow depth cross partitions **42** and **43**. The full depth cross partitions **40** and **41** may be seen to extend through the slots **24** and **25**, respectively at the ends of the unit, and the shallow depth cross partitions **42** and **43** may be seen to extend through the slots **30** and **31** in the longitudinal partition formed by the panels **15** and **16**.

Referring now to FIG. 5, there is shown a partial cross sectional view of the carton of the present invention during the erection thereof, and it may be seen that the longitudinal panels **16** and **15** are moving upwardly in the direction indicated by the arrow, and that short transverse partition **42**, which is relatively stationary, is entering into to bell shaped mouth of the slots **30**, formed by the angled upper portion **55** thereof.

In FIG. 6, the shallow depth cross partition **42** may be seen to have entered into the slot **30**, and to have engagement, on either side thereof, with the margins of the two slots **30**. This is shown in FIG. 7, where it may be seen that the linearly aligned second margins **33** of the two slots **30** in the panels **15** and **16** are in engagement with the partition **42** on offset opposite sides thereof. This abutting relationship between the margins **33** of the two slots **30** and the shallow depth cross partition **42** is such that the partition **42** is braced from either side and thereby serves to provide for a sturdier carton and one in which the eggs in adjoining cells on either side of the partition **42** will be prevented from engaging each other. It will be noted in the erected carton that the margins **33** are in offset relation to the fold line **19'** formed on the shallow depth cross-partitions **42**, **43** by virtue of the diverging relationship of the partition panels **15**, **16**. Thus, when pressure is applied at the front or back panels **18**, **13**, as indicated by the direction arrows P on FIG. 4, the partitions **41**, **42** tend to bow or fulcrum outwardly from their general plane about the fold line **19'** at the margins **33** and bind against transverse movement across the margins **33** to tend to stabilize or rigidify the front and back panels **18**, **13** when subject to the mentioned pressures.

There has been provided an egg carton affording superior protection and separation between eggs in the front and back longitudinal rows thereof, and this egg carton has intermediate slots in the longitudinal partition thereof so shaped that erection of the carton by automatic machinery may be accomplished readily, and without erratic or incomplete erection actions. Also, the carton of the present invention is such that the intermediate cross partitions are buttressed for additional support by the longitudinal partition and for better separation of eggs in adjoining cells in a single longitudinal row. These abutments also afford tautness to the cross partitions, which results in greater strength to resist hand pressure from front to rear of the carton, since any bulging tendency is avoided.

It will be obvious to those skilled in the art that various changes may be made without departing from the spirit of the invention and therefore the invention is not limited to what is shown in the drawings and described in the specification but only as indicated in the appended claims.

What is claimed is:

1. A blank for a paperboard egg carton comprising, in order, a tuck flap, a cover panel, a back panel, a bottom panel, a pair of longitudinal partition panels, a second bottom panel, a front panel, a cross partition panel, and a glue flap, said flaps and panels being separated by fold lines, said bottom panels each having a pair of transversely extending slots therein adjacent the lateral margins thereof, said longitudinal partition panels having a transversely extending slot therein adjacent each lateral margins thereof, said end slots extending substantially

continuously from adjacent the fold line between one said longitudinal panel and the adjacent bottom panel to adjacent the fold line between the other longitudinal panel and the other bottom panel, each of said longitudinal partition panels further having a pair of intermediate slots therein between said end slots, each said intermediate slot being defined by a first margin extending transversely from the fold line between said longitudinal partition panels and by a second margin spaced therefrom and extending from said fold line at an angle toward said first margin and thence in parallel relationship to said first margin, the first margin of an intermediate slot in one longitudinal partition panel joining the second margin of an intermediate slot in the other longitudinal partition panel, said second margins being in linear alignment, said cross partition panel comprising a pair of full depth cross partitions and a pair of shallow depth cross partitions therebetween, a fold line extending from lateral side edges of the blank centrally of said cross partition panel, said full depth cross partitions each having extensions with a pair of facing hooks thereon and a pendent member between said extensions, each said shallow depth cross partitions having a pair of spaced triangular apertures at the margin thereof that is adjacent said other shallow depth cross partition, the combined width of each of said longitudinal partition panels and an adjacent bottom panel being coequal and greater than one and one-half the width of said front panel for providing a longitudinal partition which will linearly abut the under surface of said cover panel when the carton is erected.

2. A blank for a paperboard egg carton comprising, in order, a tuck flap, a cover panel, a back panel, a bottom panel, a pair of longitudinal partition panels, a second bottom panel, a front panel, a cross partition panel, and a glue flap, said flaps and panels being separated by fold lines, said bottom panels each having a pair of transversely extending slots therein adjacent the lateral margins thereof, said longitudinal partition panels having a transversely extending slot therein adjacent the lateral margins thereof, each of said longitudinal partition panels further having a pair of intermediate slots therein between said end slots, each said intermediate slot being defined by a first margin extending transversely from the fold line between said longitudinal partition panels and by a second margin spaced therefrom and extending from said fold line at an angle toward said first margin and thence in parallel relationship to said first margin, the first margin of an intermediate slot in one longitudinal partition panel joining the second margin of an intermediate slot in the other longitudinal partition panel, said second margins being in linear alignment, said cross partition panel comprising a pair of full depth cross partitions and a pair of shallow depth cross partitions therebetween, a fold line extending from lateral side edges of the blank centrally of said cross partition panel, said full depth cross partitions each having extensions with a pair of facing hooks thereon and a pendent member between said extensions, each said shallow depth cross partitions having a pair of spaced triangular apertures at the margin thereof that is adjacent said other shallow depth cross partition, the combined width of each of said longitudinal partition panels and an adjacent bottom panel being coequal and greater than one and one-half the width of said front panel for providing a longitudinal partition which will linearly abut the under surface of the cover panel when the carton is erected.

3. A blank for a paperboard egg carton comprising, in order, a tuck flap, a cover panel, a back panel, a bottom panel, a pair of longitudinal partition panels, a second bottom panel, a front panel, a cross partition panel, and a glue flap, said flaps and panels being separated by fold lines, said bottom panels each having a pair of transversely extending slots therein adjacent the lateral margins thereof, said longitudinal partition panels having a transversely extending slot therein adjacent the lateral margins

thereof, each of said longitudinal partition panels further having a pair of intermediate slots therein between said end slots, each said intermediate slot being defined by a first margin extending transversely from the fold line between said longitudinal partition panels and by a second margin spaced therefrom and extending from said fold line at an angle toward said first margin and thence in parallel relationship to said first margin, the first margin of an intermediate slot in one longitudinal partition panel joining the second margin of an intermediate slot in the other longitudinal partition panel, said second margins being in linear alignment, said cross partition panel comprising a pair of full depth cross partitions and a pair of shallow depth cross partitions therebetween, a fold line extending from lateral side edges of the blank centrally of said cross partition panel, each said shallow depth cross partitions having a pair of spaced triangular apertures at the margin thereof that is adjacent said other shallow depth cross partition, the combined width of each of said longitudinal partition panels and an adjacent bottom panel being coequal and greater than one and one-half the width of said front panel for providing a longitudinal partition which will linearly abut the under surface of the cover panel when the carton is erected.

4. A blank for a paperboard egg carton comprising, in part, a tuck flap, a cover panel, a back panel, a bottom panel, a pair of longitudinal partition panels, a second bottom panel, a front panel, a cross partition panel, and a glue flap, said flaps and panels being separated by fold lines, said bottom panels each having a pair of transversely extending slots therein adjacent the lateral margins thereof, said longitudinal partition panels having a transversely extending slot therein adjacent the lateral margins thereof, each of said longitudinal partition panels further having a pair of intermediate slots therein between said end slots, each said intermediate slot being defined by a first margin extending transversely from the fold line between said longitudinal partition panels and by a second margin spaced therefrom and extending from said fold line at an angle toward said first margin and thence in parallel relationship to said first margin, the first margin of an intermediate slot in one longitudinal partition panel joining the second margin of an intermediate slot in the other longitudinal partition panel, said second margins being in linear alignment, said cross partition panel comprising a pair of full depth cross partitions and a pair of shallow depth cross partitions therebetween, a fold line extending from lateral side edges of the blank centrally of said cross partition panel, the combined width of each of said longitudinal partition panels and an adjacent bottom panel being coequal and greater than one and one-half the width of said front panel for providing a longitudinal partition which will linearly abut the under surface of the cover panel when the carton is erected.

5. A blank for a paperboard egg carton comprising, in part, a tuck flap, a cover panel, a back panel, a bottom panel, a pair of longitudinal partition panels, a second bottom panel, a front panel, a cross partition panel, and a glue flap, said flaps and panels being separated by fold lines, said longitudinal panels having a pair of intermediate slots therein, each said slot being defined by a first margin extending transversely from the fold line between said longitudinal partition panels and by a second margin spaced therefrom and extending from said fold line at an angle toward said first margin and thence in parallel relationship to said first margin, the first margin of an intermediate slot in one longitudinal partition panel joining the second margin of an intermediate slot in the other longitudinal partition panel, said second margins being in linear alignment, said cross partition panel comprising a pair of full depth cross partitions and a pair of shallow depth cross partitions therebetween, a fold line extending from lateral side edges of the blank centrally of said cross partition

panel, the combined width of each of said longitudinal partition panels and an adjacent bottom panel being co-equal and greater than one and one-half the width of said front panel for providing a longitudinal partition which will linearly abut the under surface of the cover panel when the carton is erected.

6. A paperboard set-up egg carton comprising a front, a back, a cover integral with said back and extending forwardly in a generally horizontal plane to said front, a longitudinally extending bottom and partition structure integral with said front and back and comprising a pair of gently sloping bottoms integrally and hingedly joined to the lower margins of said back and front and a pair of sharply rising partition panels extending upwardly in spaced angular relation to an apex and foldably joined at their lower margins to said bottoms, said apex underlying and in contact with the underside of said cover, said longitudinal panels having margins therein defining a pair of intermediate slots, the margins defining an intermediate slot in one panel comprising a first margin lying in a plane substantially perpendicular to said apex and extending therefrom, and a second margin spaced from said first margin and having a lower portion substantially parallel to said first margin and an upper portion extending from the upper end of said lower portion, and angled away from said first margin, to said apex, the margins defining an adjacent spaced intermediate slot in the other panel being similar to said first and second margins and diametrically opposed thereto with the angled upper portion of each said second margin joining the upper portion of the first margin in the other panel, the second margins being in spaced co-planar relation, whereby to provide a bell-mouthed opening at the apex communicating with said intermediate slots, said longitudinal panels further having margins therein defining a pair of slots adjacent the ends of said panels, said margins at each end of each panel extending downwardly from said apex in spaced parallel relationship and each margin in one panel lying in the same transverse plane as a margin in the other panel, a pair of full depth cross partitions joined to said front and back adjacent the upper margins thereof and extending through said end slots and a pair of shallow depth cross partitions similarly joined to said front and back and extending through said intermediate slots, said shallow depth cross partitions including a vertical fold line extending from the upper and lower margins thereof between said spaced second margins, said second margins forming spaced abutments for said shallow depth partitions, one such second margin being offset on either side of each of said shallow depth partitions, said bottoms having slots therein adjacent the ends thereof and receiving the lower parts of said full depth partitions therethrough, said full depth partitions having inwardly directed hooks on the lower ends thereof in engagement with said longitudinal bottom and partition structure, each said cross partition having a pair of spaced upwardly converging margins in the lower central part thereof and lying outwardly of said panels, and a member on each partition depending between said margins and extending downwardly between said panels.

7. A paperboard set-up egg carton comprising a front, a back, a cover integral with said back and extending forwardly in a generally horizontal plane to said front, a longitudinally extending bottom and partition structure integral with said front and back and comprising a pair of gently sloping bottoms integrally and hingedly joined to the lower margins of said back and front and a pair of sharply rising partition panels extending upwardly in spaced angular relation to an apex and foldably joined at their lower margins to said bottoms, said apex underlying and in contact with the underside of said cover, said longitudinal panels having margins therein defining a pair of intermediate slots, the margins defining an intermediate slot in one panel comprising a first margin lying in a plane substantially perpendicular to said apex

and extending therefrom, and a second margin spaced from said first margin and having a lower portion substantially parallel to said first margin and an upper portion extending from the upper end of said lower portion, and angled away from said first margin, to said apex, the margins defining an adjacent spaced intermediate slot in the other panel being similar to said first and second margins and diametrically opposed thereto with the angled upper portion of each said second margin joining the upper portion of the first margin in the other panel, the second margins being in spaced co-planar relation, whereby to provide a bell-mouthed opening at the apex communicatnig with said intermediate slots, said longitudinal panels further having margins therein defining a pair of slots adjacent the ends of said panels, said margins at each end of each panel extending downwardly from said apex in spaced parallel relationship and each margin in one panel lying in the same transverse plane as a margin in the other panel, a pair of full depth cross partitions joined to said front and back adjacent the upper margins thereof and extending through said end slots and a pair of shallow depth cross partitions similarly joined to said front and back and extending through said intermediate slots, said shallow depth cross partitions including a vertical fold line extending from the upper and lower margins thereof between said spaced second margins, said second margins forming spaced abutments for said shallow depth partitions, one such second margin being offset on either side of each of said shallow depth partitions, said bottoms having slots therein adjacent the ends thereof and reciving the lower parts of said full depth partitions therethrough, said full depth partitions having inwardly directed hooks on the lower ends thereof in engagement with said longitudinal bottom and partition structure.

8. A paperboard set-up egg carton comprising a front, a back, a cover integral with said back and extending forwardly in a generally horizontal plane to said front, a longitudinally extending bottom and partition structure integral with said front and back and comprising a pair of gently sloping bottoms integrally and hingedly joined to the lower margins of said back and front and a pair of sharply rising partition panels extending upwardly in spaced angular relation to an apex and foldably joined at their lower margins to said bottoms, said apex underlying and in contact with the underside of said cover, said longitudinal panels having margins therein defining a pair of intermediate slots, the margins defining an intermediate slot in one panel comprising a first margin lying in a plane substantially perpendicular to said apex and extending therefrom, and a second margin spaced from said first margin and having a lower portion substantially parallel to said first margin and an upper portion extending from the upper end of said lower portion, and angled away from said first margin, to said apex, the margins defining an adjacent spaced intermediate slot in the other panel being similar to said first and second margins and diametrically opposed thereto with the angled upper portion of each said second margin joining the upper portion of the first margin in the other panel, the second margins being in spaced co-planar relation, whereby to provide a bell-mouthed opening at the apex communicating with said intermediate slots, said longitudinal panels further having margins therein defining a pair of slots adjacent the ends of said panels, said margins at each end of each panel extending downwardly from said apex in spaced parallel relationship and each margin in one panel lying in the same transverse plane as a margin in the other panel, a pair of full depth cross partitions joined to said front and back adjacent the upper margins thereof and extending through said end slots and a pair of shallow depth cross partitions similarly joined to said front and back and extending through said intermediate slots, said shallow depth cross partitions including a vertical fold line extending from the upper and lower margins

thereof between said spaced second margins, said second margins forming spaced abutments for said shallow depth portions, one such second margin being offset on either side of each of said shallow depth partitions, said bottoms having slots therein adjacent the ends thereof and receiving the lower parts of said full depth partitions therethrough.

9. A paperboard set-up egg carton comprising a front, a back, a cover integral with said back and extending forwardly in a generally horizontal plane to said front, a longitudinally extending bottom and partition structure integral with said front and back and comprising a pair of gently sloping bottoms integrally and hingedly joined to the lower margins of said back and front and a pair of sharply rising partition panels extending upwardly in spaced angular relation to an apex and foldably joined at their lower margins to said bottoms, said apex engaging the underside of said cover, said longitudinal panels having margins therein defining a pair of intermediate slots, the margins defining an intermediate slot in one panel comprising a first margin lying in a plane substantially perpendicular to said apex and extending therefrom, and a second margin spaced from said first margin and having a lower portion substantially parallel to said first margin and an upper portion extending from the upper end of said lower portion, and angled away from said first margin, to said apex, the margins defining an adjacent spaced intermediate slot in the other panel being similar to said first and second margins and diametrically opposed thereto with the angled upper portion of each said second margin joining the upper portion of the first margin in the other panel, the second margins being in spaced co-planar relation, whereby to provide a bell-mouthed opening at the apex communicating with said intermediate slots, said longitudinal panels further having margins therein defining a pair of slots adjacent the ends of said panels, a pair of full depth cross partitions joined to said front said back adjacent the upper margins thereof and extending through said end slots and a pair of shallow depth cross partitions similarly joined to said front and back and extending through said intermediate slots, said shallow depth cross partitions including a vertical fold line extending from the upper and lower margins thereof between said spaced second margins, said second margins forming spaced abutments for said shallow depth partitions, one such second margin being offset on either side of each of said shallow depth partitions.

10. A paperboard set-up egg carton comprising a front, a back, a cover integral with said back and extending forwardly in a generally horizontal plane to said front, a longitudinally extending bottom and partition structure integral with said front and back and comprising a pair of gently sloping bottoms integrally and hingedly joined to the lower margins of said back and front and a pair of sharply rising partition panels extending upwardly in spaced angular relation to an apex and foldably joined at their lower margins to said bottoms, said apex closely engaging the underside of said cover, said longitudinal panels having margins therein defining a pair of intermediate slots, the margins defining an intermediate slot in one panel comprising a first margin lying in a plane substantially perpendicular to said apex and extending therefrom, and a second margin spaced from said first margin and having a lower portion substantially parallel to said first margin and an upper portion extending from the upper end of said lower portion, and angled away from said first margin, to said apex, the margins defining an adjacent spaced intermediate slot in the other panel being similar to said first and second margins and diametrically opposed thereto with the angled upper portion of each said second margin joining the upper portion of the first margin in the other panel, the second margins being in spaced co-planar relation, whereby to provide a bell-mouthed opening at the apex communicating with said intermediate slots, and a pair of shallow depth cross partitions joined to said front and back and extending through said intermediate slots, said shallow depth cross partitions including a vertical fold line extending from the upper and lower margins thereof between said spaced second margins, said second margins forming spaced abutments for said shallow depth partitions, one such second margin being offset on either side of each of said shallow depth partitions.

References Cited in the file of this patent

UNITED STATES PATENTS

2,106,613	Levkoff	Jan. 25, 1938
2,321,209	Holwick	June 8, 1943
2,340,753	Inman	Feb. 1, 1944
2,664,234	Burger	Dec. 29, 1953
2,766,924	Cormier	Oct. 16, 1956

FOREIGN PATENTS

502,041	Great Britain	Mar. 10, 1939