

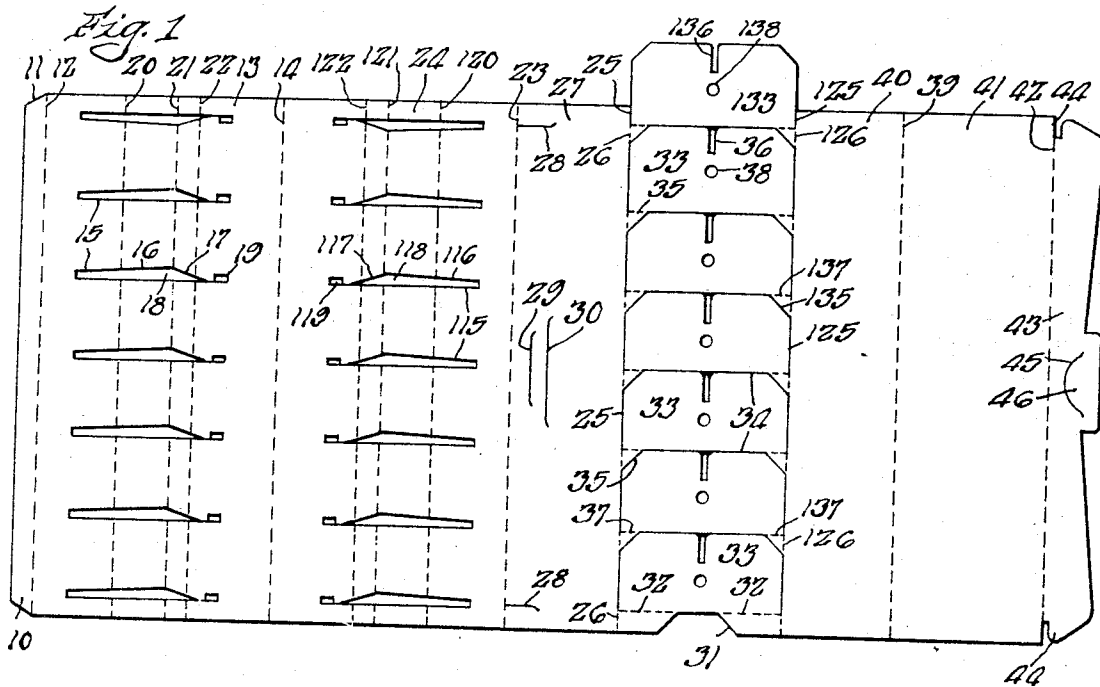
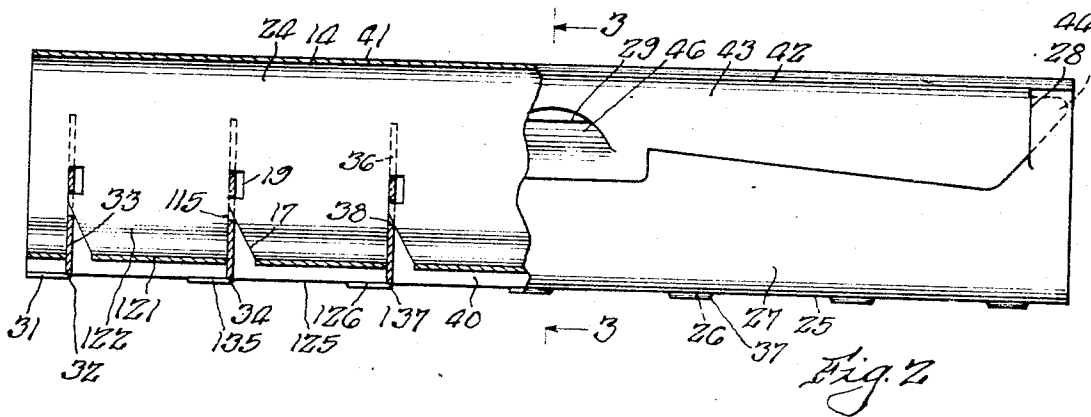
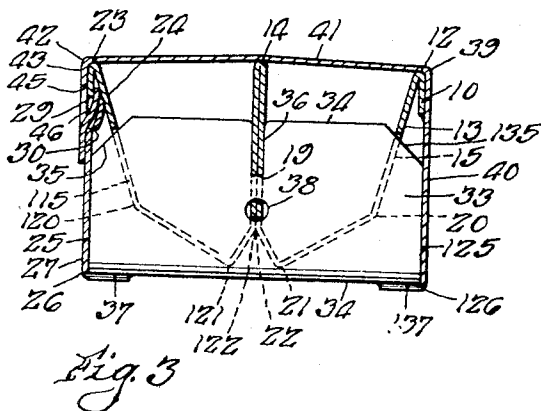
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EGG CARTON

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EGG CARTON

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5 Claims. (Cl. 229—29)

The present invention has to do with a collapsible device for packing fragile articles, as for example, eggs, and has to do particularly with the provision of a new and improved carton formed from a blank cut from a single sheet of flat material such as cardboard.

One of the objects of the present invention is the provision of an improved packing means for fragile articles;

Another object of the invention is the provision of a novel means for suspending the packed article in the carton, such suspending means forming a means for compensating for the different sizes of the articles inserted into the carton;

A further object of the invention is the provision of reinforcement for the carton whereby a large number of the cartons may be placed one upon another without danger of collapse or distortion, and the resulting destruction or damage to the articles enclosed therein;

Another object of the invention is the provision of a simplified form for a blank from which a carton of great strength may be formed;

Still another object of the invention is the provision of a unique locking device for a carton or the like;

A further object of the invention is to provide novel interlocking of sections of a blank whereby better packing facilities are had for fragile objects and in which there can be no entry without destruction of the carton parts, thus providing a device in which articles may not be substituted without detection; and

A still further object of the invention is the provision of a new and unique blank in which there is little or no waste and which is so arranged that the parts have a simple interlock for assembly but are incapable of disassembly without destruction of the parts thereof.

These objects and such other objects as may hereinafter appear are obtained by the novel construction, unique arrangement, and improved combination of parts or elements as shown in the accompanying drawing in which one form of the invention is illustrated.

In said drawing:

Figure 1 is a plan view of the blank from which the carton illustrated in Figures 2 and 3 is formed;

Figure 2 is a side illustration, partly in section, of the form of the invention made from the blank shown in Figure 1; and

Figure 3 is an end illustration of the carton illustrated in Figure 2.

Like reference characters are used to designate similar parts in the drawing and in the description of the invention which follows.

Reference will be had to Figure 1 first. The blank is formed from a rectangular sheet of material. This material, as previously stated, may be cardboard of suitable thickness and strength. It must as a body serve to stand the reasonable strains to which an egg carton or the like is subjected. At the same time, it should be of such consistency that it will not tear as an incident to the cutting and scoring shortly to be described.

In Figure 1, the parts will be named in the order of their appearance from the left hand side of the figure. Section 10 comprises a narrow tongue with beveled ends 11. To the tongue 10, in the assembled box, is applied glue as is hereinafter pointed out.

Tongue 10 is separated from the next adjacent part or section by a score 12. The next adjacent section 13 is one of the article supporting parts of which there are two. The section 13 terminates at the score line 14 which is the high point in the bottom section of the crate or carton. In section 13 are a number of slits or openings 15 which have spreading edges 16 and 17, terminating in a triangular section 18, which in turn terminates in a rectangular opening 19. In the section 13 are three longitudinal parallel scores 20, 21 and 22. The score 21 is deeper than the scores 20 and 22 and said score 21 defines the lowermost point in the article supporting part of the device.

To the right, Figure 1, of section 13 and defined by the scores 14 and 23, is a section 24 which is the reverse of section 13. The reversed parts have the same reference characters as the parts in section 13 with the numeral one hundred prefixed thereto. Divided from section 24 by the score 23 and defined at the right, Figure 1, by the slits 25 and scores 26, which are alternately arranged, is one side section 27. At the ends of the section 27 are two slits 28 which depend downwardly from the score 23, the lower end of the slits 28 preferably taking on an outward curve. In the central portion of section 27 are two lengthwise slits 29 and 30. The slit 29 is of less length than the slit 30 and the two are associated for forming a lock later to be described. The ends of slits 29 and 30 are both turned down for convenience in obtaining the said locking action.

The bottom of the device falls between the slits 25 and the scores 26 on the one side and the complementary slits 125 and scores 126 on the opposite side of the top. Said bottom sec-

tion is divided into a number of different sections. The end of the bottom section, lower portion of Figure 1, comprises two flaps defined by scores 26 and 126 at the sides, by the lower edge of the blank and by two scores 32 which terminate at the corners of a cut-out section 31 extending in from the lower edge of the blank.

Said flaps are used to support a partition 33. Six similar partitions 33 fall within the bottom section and a seventh is formed by an extension thereof. Each of the partitions 33 is held in position by triangular sections, attached at the scores 26 and 126 at the opposite sides of the bottom, and at the aligned scores 37 and 137. Thus a partition, except the lowermost one shown in Figure 1, comprises a section defined at its top and bottom by slits 34, at one side by slits 25 and 35, and at the other side by slits 125 and 135.

At the upper edge of each of the partitions 33, Figure 1, is a slot 36 and in line therewith a circular aperture 38. Projecting partly away from the blank at its top edge, Figure 1, is a partition 133 which is like a section 32 save that its body is formed by cutting the material out of the blank without any bounding side or end sections. The slot therein is numbered 136 and the aperture 138.

To the right of the bottom section from which the partitions 33 are formed is a score 39 which defines a side section 40 which section is defined at its left, in Figure 1, by the slits 125 and the scores 126.

To the right of section 40, Figure 1, is a top 41 which is defined by the scores 39 and 42. A flap 43 depends from the cover 41, being divided therefrom by the score 42. Said flap 43, at its ends has inwardly extending slots 44. At its center and at the ends of the inwardly pointed cuts is an arcuate slit 45. A tongue 46 projects from the flap 43 at its center and surrounds the slit 45.

A blank of the type described may be made in a single die cutting operation and is made with very little waste. In fact, the arrangement of the parts of the blank is such that the blanks may be cut from large sheets of cardboard with little or no waste whatever.

To assemble the carton, several plans may be followed, but only one will be recited.

A strip of glue is placed on flap 10, then the blank is folded on scores 12, 21, 14, 121 and 23. The remainder of the blank is turned under, the folding being on the scores 26 and slits 25. Concurrently, the partitions 33 and 133 are turned upwardly and inserted into their proper and complementary openings 15 and 115. Thereafter, the side 40 is turned upwardly along the slits 125 and the scores 126. The glued section of the flap 10 is made to adhere to section 40 in the manner shown in Figure 3, right hand side.

The partitions 33 and 133 are inserted further into the slits 15 and 115, the partitions and slits interlocking to insure against the displacement of the partitions, which, with the material intermediate the slits 15 and 115, at opposite sides of the carton, forms a basket to receive an egg or other article.

The tongue of material between the triangular section 18 of the slit 15 and the rectangular cut 19 is adapted to be inserted into the apertures 38 and 138 to form an additional interlocking of material so that the abutting sections of the parts 13 and 24 will be held in position adjacent the scores 22 and 122, thus to provide a support for

the article in the pockets in the carton which pockets are flexible because of the scores 20, 21 and 22 on the one side and the scores 120, 121 and 122 on the other side. Such an arrangement leaves the material forming the pockets to bend along the scores 20 and 21, on the one side, and along the scores 120 and 121 on the other, so that if a large egg or other large article is placed in a pocket, it will fill the pocket in such a manner as to cause the bottom of the pocket to be drawn upwardly to cause the section of material between scores 12 and 20 on the one side and between 120 and 23 on the other side to approach the adjacent walls 40 and 27, respectively.

A floating basket is thus arranged which accommodates itself to the size of the article packed in each pocket and compensates for the difference in size of the various articles packed.

It will be noted in Figure 3 that the center of the carton comprises two thicknesses of material, i. e., the material adjacent the score line 14 and at each side thereof. This material is supported in fixed position by the interlock thereof with the partitions and is so cut and folded that the top of the center partition thus provided is slightly higher than the outside walls of the carton. In this manner, the center of the device is given greater strength and the possibility of crushing the container is reduced to negligibility.

When the carton is filled, the cover member is pulled thereover and the flap 43 brought in position over the side 27 thereof. The tongue 46 is forced into the slit 30 until the tongue formed by the arcuate slit 45 may be inserted into slit 29 in which position it is firmly locked against displacement and cannot be removed without leaving evidences of tampering with the carton. In fact, removal is tantamount to destruction of the cover section adjacent to the tongue 46.

Concurrent to the folding of the flap 43 in place and the locking thereof by the tongue 46, the ears 44 are projected into the slits 28 by a slight temporary bending of those ears. End thrust of the flap 43 is in this manner precluded so that the locking flap 46 will not be damaged.

When the carton has been filled and sealed in the manner described, it is an impossibility to remove an egg or other article from the pockets therein without destroying the material of the partition the interlocking is so firm and complete. Thus one who might wish to do so may not readily replace good eggs with less valuable ones as has been the custom in the past in numerous localities. A secure and difficult to destroy package is thus obtained at the cost of the manufacture of other cartons far less secure and much less sturdy in their structure.

What I claim is new and desire to secure by Letters Patent of the United States is:

1. An egg packing carton providing parallel rows of compartments and comprising a single blank of material divided into sections and folded into a parallelepiped, certain sections of said blank forming the opposed side walls of said compartments and extending to the top edge of the carton, and other sections forming a partition between said rows of compartments extending to adjacent the bottom edge of said carton and providing the inner and adjacent walls of said compartments, said side walls depending angularly from the top edge of the carton to the bottom of said partition and forming in each compartment an individual and deformable hammock for supporting an egg.

2. A packing carton providing parallel rows of

<p>compartments and comprising a single blank of material divided into sections and folded into a parallelepiped, certain sections of said blank forming opposed side walls for said compartments and depending from the top edge of said carton, and other sections providing a partition extending longitudinally of said carton and forming adjacent walls in said compartments, the material of said side walls and partition forming parts being longitudinally scored to provide a plurality of angularly disposed plane surfaces for supporting eggs, the insertion of an egg into a compartment displacing said supporting surfaces in such compartment angularly to compensate for the shape and size of such egg.</p>	<p>parallelepiped comprising, in cross section, side walls for said compartments depending from the upper edges of said carton, a partition extending intermediate said compartments and longitudinally of said carton, and partition walls arranged transversely of said carton and extending upwardly from the bottom thereof, said transverse partitions supporting said longitudinal partition, the material of said blank between each side wall and the bottom edge of said longitudinal partition comprising a series of planes angularly disposed to one another to provide a hammock-like bottom for each compartment, all of said planes being above the plane of the bottom of said carton.</p>
<p>3. A packing carton formed from a single sheet of material and providing a plurality of compartments and comprising, in cross section, side walls for said compartments, said side walls depending from the upper edges of said carton, transverse partitions extending upwardly from the bottom of said carton to form walls intermediate said compartments, and a partition between said side walls, interlocking with said transverse partitions, and forming the adjacent and inner compartment walls of said compartments, the material of said sheet extending from the lower edge of said partition to said side walls providing for individual eggs a hammock-like supporting bottom for each of said compartments.</p>	<p>5. A packing carton providing parallel rows of compartments and formed from a single blank of sheet material folded into a parallelepiped, said carton comprising transverse partition sections extending upwardly from the bottom thereof to provide walls between said compartments, side walls for said compartments depending from the upper edge of said carton, and a partition extending longitudinally of said carton, the material thereof having slits to receive a central section of said transverse partitions, said longitudinal partition forming the inner walls for said rows of compartments, the side walls of said compartments depending angularly downwardly to the bottom edge of said longitudinal partition to form a hammock-like bottom for each compartment removed from the bottom of said carton.</p>
<p>4. A packing carton formed from a single blank of sheet material and providing a plurality of compartments, said sheet when folded into a</p>	<p>FRANK M. RISK.</p>
35	110
40	115
45	120
50	125
55	130
60	135
65	140
70	145
75	150