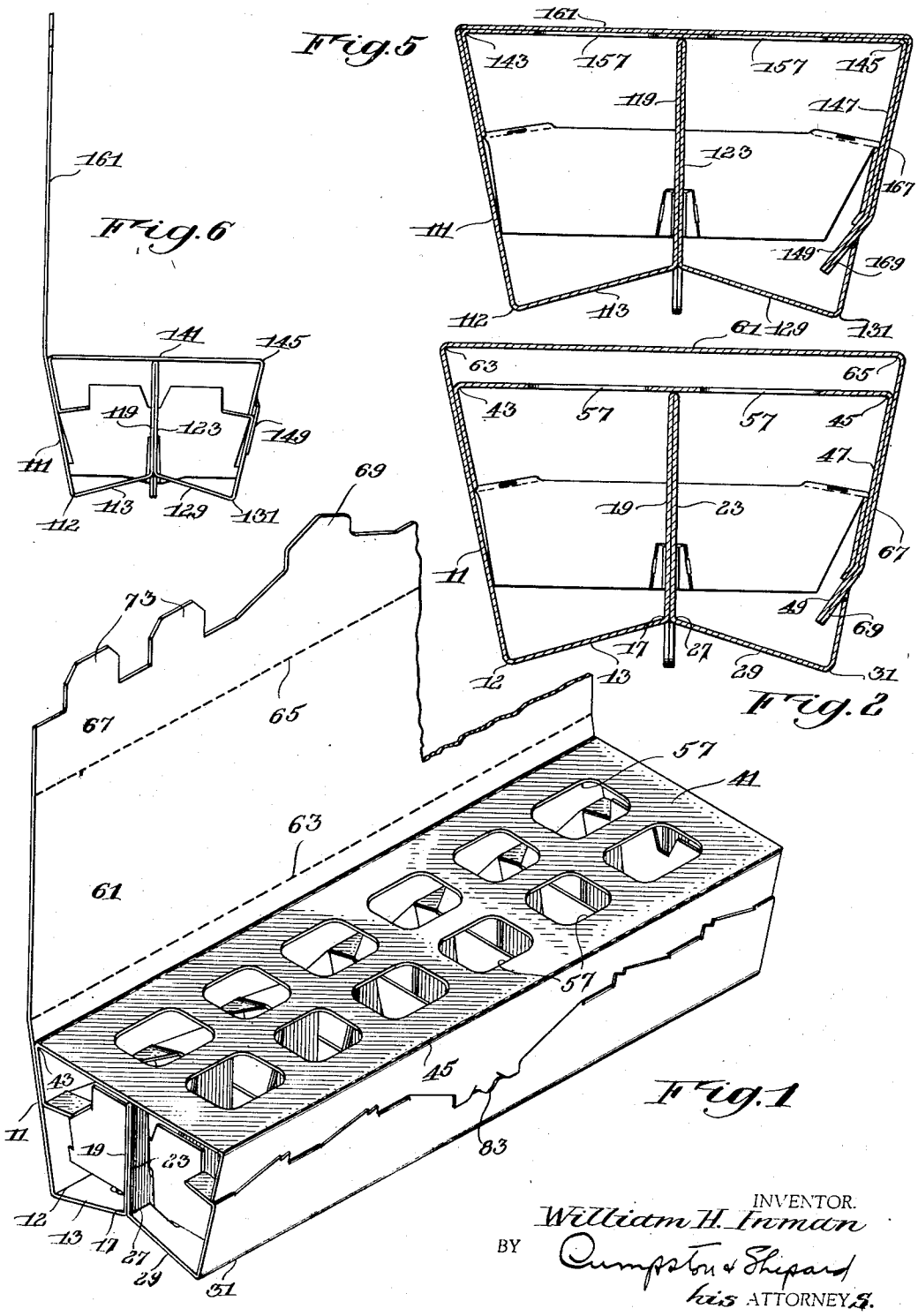
Nov. 2, 1943. W. H. INMAN 2,333,181

CARTON CONSTRUCTION

Filed June 14, 1941 2 Sheets-Sheet 1



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Fig. 3

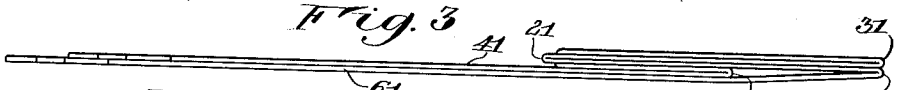


Fig. 7

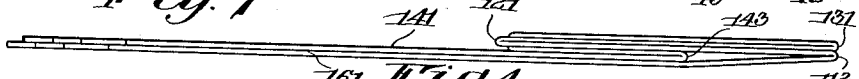
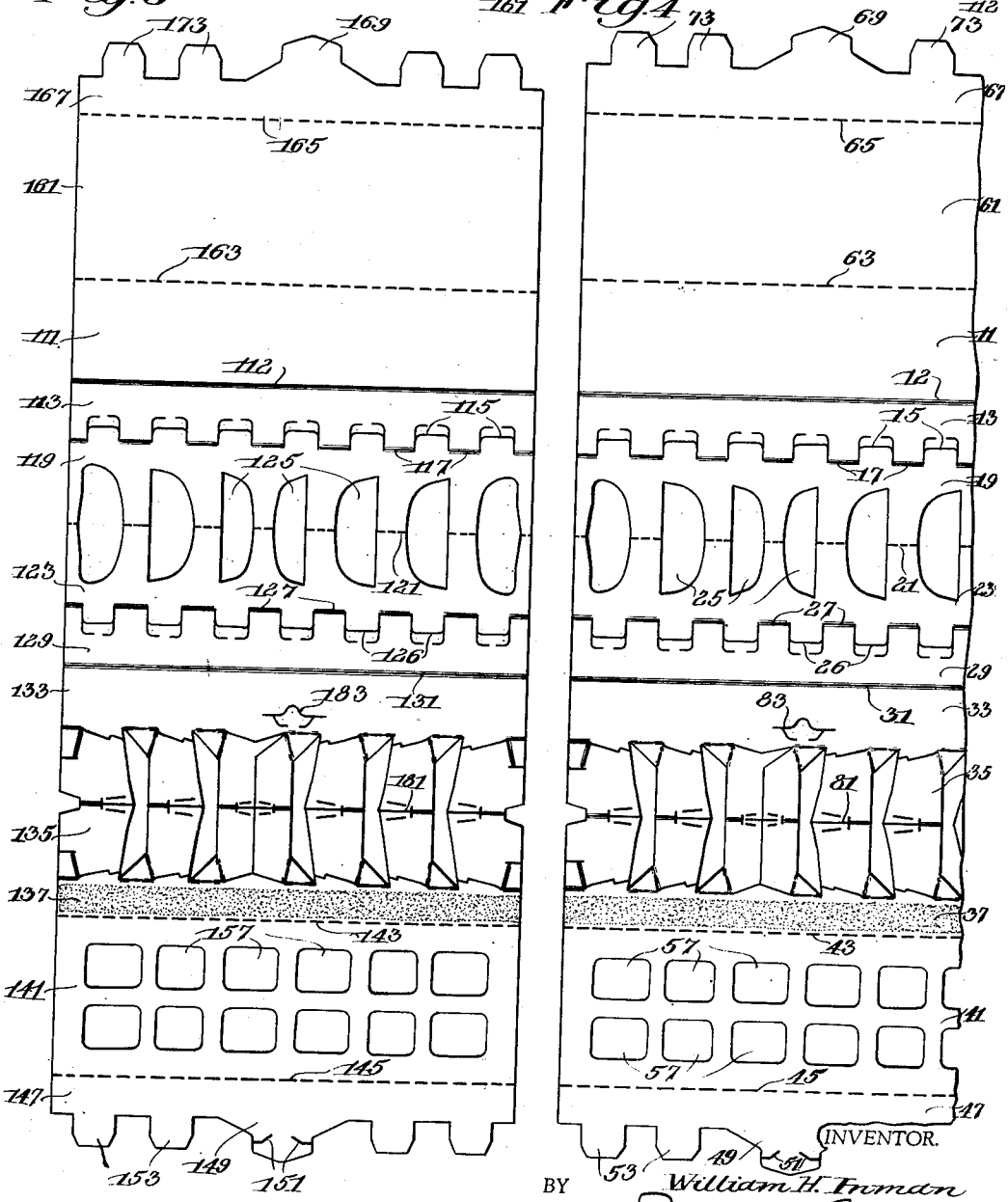


Fig. 8

Fig. 4



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Patented Nov. 2, 1943

2,333,181

UNITED STATES PATENT OFFICE

2,333,181

CARTON CONSTRUCTION

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Application June 14, 1941, Serial No. 398,093

8 Claims. (Cl. 229—29)

This invention relates to a carton intended primarily for holding eggs, although capable also of use in holding other fragile articles such as Christmas tree ornaments, electric light bulbs, etc.

An object of the invention is the provision of a generally improved and more satisfactory carton of this type.

Another object is the provision of a carton having an outer cover section of the usual imperforate form, in combination with an inner cover section which is perforated to permit inspection of the articles within the carton, and which is locked in place so that it cannot be removed except by tearing.

Still another object is the provision of such a carton comprising a one-piece construction, in which all parts of the carton, including the inner cover section and the outer cover section, are made from a single piece or blank of carton stock.

A further object is the provision of a carton having an inner cover section locked in place to prevent removal of the packed articles from the carton without tearing, and an outer cover section capable of being opened and closed independently of the inner cover section, and a merchandise-receiving space or compartment between the inner and outer cover sections.

To these and other ends the invention resides in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawings:

Fig. 1 is a perspective view of a carton in accordance with a preferred embodiment of the invention;

Fig. 2 is a transverse vertical section through the preferred form of carton, with the cover in closed position;

Fig. 3 is an end view of the carton in its knocked-down folded condition;

Fig. 4 is a plan of the blank from which the preferred form of carton is made;

Fig. 5 is a vertical transverse section similar to Fig. 2, showing a modified form of the carton;

Fig. 6 is an end view of the form of carton shown in Fig. 5, with the outer cover section in open position;

Fig. 7 is an end view of the modified form of construction, in its knocked-down folded condition, and

Fig. 8 is a plan of the blank from which the modified construction is made.

The same reference numerals throughout the several views indicate the same parts.

Referring now especially to Figs. 1, 2, and 4, the preferred form of carton embodying the present invention is constructed of a single piece of cardboard or paper board of the kind usually called carton stock, suitably cut and scored, as indicated in Fig. 4, and folded to make the complete article as indicated in Figs. 1 and 2. The blank includes a back wall section 11 separated by a score line or fold line 12 from a rear bottom wall section 13 which is separated by cuts 15 and by a fold line or score line 17 from a central partition section 19 which, in turn, is separated by the fold line or score line 21 from another central partition section 23 which is substantially a reversed duplicate of the section 19. Cut-out openings 25 are provided in the sections 19 and 23. The partition section 23 is separated by cuts 26 and fold lines or score lines 27 from a front bottom wall section 29 connected by a score line or fold line 31 to the front wall section 33 which, in turn, is connected to a transverse-partition-forming section indicated in general at 35, the other edge of the section 35 being connected to a fastening section 37 coated with adhesive by which the section 37 is to be stuck to the inner face of the rear wall 11 a little below the top edge thereof.

The above described part of the blank (elements 11 to 37, inclusive) when folded and glued in familiar manner, forms the front, rear, and bottom walls of the carton, together with a longitudinal partition (doubled upon itself along the line 21) extending through the center thereof, and a series of transverse partitions which extend from the front wall to the back wall, through the cut-out spaces 25 in the longitudinal partition. The relationship of the parts of the blank to each other can be readily understood from a study of the blank (Fig. 4) in conjunction with the cross sectional view (Fig. 2).

Near one end of the blank is an inner cover section 41 one edge of which is connected to the strip 37 by the score line 43, preferably a cut or perforated score line to provide a weakened line for easy tearing. The opposite edge of the inner cover section 41 is connected by a similar weakened score line 45 to a locking flap section 47 having a central locking tab 49 with lateral cuts 51 extending inwardly from the side edges thereof as shown, and also having retaining tabs 53. The inner cover section 41 is provided with one or more inspection openings or windows 57, preferably equal in number to

the compartments provided in the carton, with one window 57 overlying each compartment. The windows are of fairly liberal size, to permit easy and reasonable inspection of the contents of the compartments, but are sufficiently small with relation to the size of the articles within the compartments so that such articles cannot be removed through the window openings.

The opposite end of the blank is provided with an outer cover section 61 connected at one edge to the upper edge of the back wall 11 by a score line 63 which, like the score line 43, is preferably cut or perforated to provide a weakened line for easy tearing. The opposite edge of the outer cover section 61 is connected by a similar weakened line 65 a retaining flap 67 having a central tab 69 and other tabs 73. The tabs 69 and 73 may correspond in general shape to the tabs 49 and 53, respectively, but the central tab 69 is not a locking tab and is not provided with locking slits similar to the locking slits 51 of the tab 49.

In this preferred construction, the dimensions of the parts are so chosen that when the outer cover section 61 is in closed position, it will lie at an elevation spaced above the inner cover section 41, as best seen in Fig. 2, providing a shallow merchandise-receiving compartment between these two cover sections, in which may be placed any desired articles, such as articles associated with or related to the articles within the cellular compartments below the cover section 41. For example, when the cellular compartments are used for holding eggs, a shallow package containing strips of sliced bacon may be placed between the cover sections 41 and 61. When the cellular compartments are used for holding Christmas tree ornaments, a package of tinsel may be placed between the cover sections 41 and 61.

The carton is shipped from the factory to the person who is to pack it with articles of merchandise, in a relatively flat folded form, best shown in Fig. 3. In such form, the bottom sections 13 and 29 are folded flat against each other, in the same planes with the central partition sections 19 and 23, respectively, while the transverse partition sections 35 are folded along their center lines 81, and the inner and outer cover sections 41 and 61 are flat against each other and in substantially a prolongation of the walls 11 and 13.

When a carton of this knocked-down or flat form is to be used, it is opened up in known manner, by spreading the corners or core lines 12 and 31 in a direction away from each other and then turning the transverse partition sections 35 downwardly into substantially vertical parallel planes. Both cover sections meanwhile remain in their open position, extending substantially straight upwardly from the rear wall 11.

Then the desired articles, for example eggs, are placed in the cellular compartments. Then the inner cover section 41 is folded down to cover the cellular compartments, and at the same time the flap 47 on the upper cover section is bent at substantially a right angle to the inner cover section, and the locking tab 49 is thrust through a locking slit 83 formed in the front wall section 33, which slit preferably has the shape shown in Fig. 4. As the locking tab 49 goes down through the slit 83, the other tabs 53 go into and are frictionally retained in the openings left at the upper edge of the front wall 33 by virtue of the folding down of the transverse partition sections 35. When the locking tab 49 is thrust home through the slit 83, it automatically locks therein. The two small wings formed at the end of the tab 49 by the slits 51 pass through the slit 83 and catch firmly on the material just above the slit 83 upon any subsequent attempt to withdraw the tab 49. The material of the tab 49 just above the slits 51 overlaps the slit 83, extending down to a position slightly below this slit. The locking action is easy, automatic, and rapid, and takes place more quickly than it can be described. Thereafter, it is practically impossible, normally, to withdraw the locking tab 49 from its locked position in the front wall 33, without tearing the tab or tearing the material of the front wall around the slit 83, which tearing would be apparent upon inspection and would be a warning to the intending purchaser that the carton had been tampered with.

After the inner cover section is locked in place, any other merchandise, such as a thin package of sliced bacon, may be laid on top of the inner cover 41, after which the outer cover section 61 may be brought down to its closed position, the flap 67 being bent along the line 65 at substantially a right angle to the cover 61, the tab 69 being thrust through the slit 83 in front of the tab 49, and the tabs 73 being thrust down in front of the tabs 53, between these tabs and the upper edge of the front wall 33. The tabs 69 and 73 are held in place merely by friction, and are not locked, so that these tabs may be pulled out easily to open the outer cover section 61 without damaging the carton in any way.

In many instances, the bacon or other supplementary merchandise will not be packed in the carton by the same establishment which places the eggs or first merchandise therein, but will be put in later. For example, the egg producer will pack the carton with eggs, lock the inner cover section 41 in place, close the outer cover section 61, and ship the carton to a grocery store. Then the grocer will open the outer cover section 61, insert the package of bacon on top of the locked inner cover section 41, and again close the outer cover section 61. But the grocer cannot open the inner cover section 41 to substitute inferior eggs for the eggs originally packed therein, without tearing the carton in such a way as to give a telltale indication of tampering.

The prospective purchaser may readily open the outer cover section 61, inspect any supplementary merchandise which overlies the inner cover section 41, and may lift such supplementary merchandise in order to inspect the eggs through the inspection windows 57. When the purchase has been made and the eggs are to be used, the outer cover section 61 may be completely torn off the remainder of the carton by tearing along the weakened line 63 at the upper edge of the back wall, if desired. The inner cover section may be opened, to obtain access to the eggs, either by pulling upwardly on the flap 47 sufficiently strongly to tear the tab 49, or, more easily, by grasping the inner cover section 41 at one end thereof and pulling it briskly upwardly, tearing the cover section completely off of the carton along the two parallel weakened lines 43 and 45 at the front and rear edges of this inner cover section. The outer cover section 61 need not be torn off, of course, and after the inner cover section 41 is torn out, the outer cover sec-

tion 61 may be kept closed except when individual eggs are being removed from the carton.

A modified construction shown in Figs. 5 to 8, inclusive, is identical with the construction above described, except that the outer cover section is not spaced above the inner cover section but lies substantially flat against the inner cover section, leaving no compartment for supplementary merchandise. The only difference is in the dimensions of the rear wall, the outer cover section, and the front flap connected to the outer cover section. The other features and details of construction, except for these different dimensions, are exactly the same as in the preferred embodiment illustrated in Figs. 1 to 4, inclusive, and the modification in Figs. 5 to 8 has its parts indicated by the same reference numerals used in Figs. 1 to 4 with the addition of one hundred to each numeral, so that part 111 of Figs. 5 to 8 corresponds to part 11 of Figs. 1 to 4, part 141 of Figs. 5 to 8 corresponds to part 41 of Figs. 1 to 4, and so forth.

This modified construction does not have the advantage of a compartment for supplementary merchandise, but otherwise it has the advantages of the construction first described. For example, the egg producer may seal his eggs in the carton by means of the locking feature of the inner cover section 141, preventing substitution by the grocer. The eggs are suitably protected by an imperforate outer cover section 161, but the prospective purchaser, wishing to view the eggs at the grocery store, may easily open the outer cover section 161 and view the eggs through the inspection openings 157 without, however, being able to remove the eggs. Or the grocer, if he wishes to make a more attractive display of the eggs on his counter, may rip off the outer cover section 161 entirely, by tearing it along the line 163, so that the eggs on the counter of his store may be readily seen through the openings in the inner cover section. The same removal of the outer cover section for counter display purposes is possible, of course, in the preferred form of construction previously described.

While certain embodiments of the invention have been disclosed, it is to be understood that the inventive idea may be carried out in a number of ways. This application is therefore not to be limited to the precise details described, but is intended to cover all variations and modifications thereof falling within the scope of the appended claims.

I claim:

1. A carton for eggs and the like, comprising a one-piece blank cut, scored and folded to provide front and back walls and partition means subdividing the space between said walls into a series of article-receiving compartments, an inner cover section hinged at one of its edges adjacent to one of said walls and extending across said compartments and having openings large enough to permit viewing of articles in said compartments but too small to permit removal of said articles from said compartments through said openings, interlocking tab and slit means for locking the opposite edge of said inner cover section to the opposite one of said walls against separation therefrom except by tearing the material, an outer cover section also hinged at one of its edges adjacent one of said walls and extending across said compartments in overlying relation to said inner cover section, and means for releasably fastening the opposite edge of said outer cover section to the opposite one of said walls.

2. A construction as described in claim 1, further comprising a weakened tear line adjacent the hinge connection of said outer cover section to said one of said walls, so arranged that said outer cover section may be opened and then removed from the remainder of said carton by tearing along said weakened line, without displacing said inner cover section which may remain in place.

3. A construction as described in claim 1, in which said outer cover section, when closed, is spaced substantially above said inner cover section to provide a merchandise-receiving compartment between the two cover sections.

4. A construction as described in claim 1, in which said outer cover section, when closed, lies substantially against the top of said inner cover section.

5. A carton for eggs or the like, comprising a single piece of carton stock cut, scored, and folded to provide front, rear, and bottom walls, a longitudinal partition and a series of transverse partitions subdividing the space between said walls into a series of compartments each adapted to receive an article, an inner cover section hinged at its rear edge adjacent said rear wall and extending across all of said compartments and having openings large enough to permit reasonable viewing of the articles in said compartments but too small to permit removal of said articles from said compartments through said openings, a locking flap hinged to said inner cover section at its front edge, said locking flap having a tab extending through and interlocking with a slit in said front wall and being locked therein against removal except by tearing the material, an outer cover section also hinged at its rear edge adjacent said rear wall and extending across all of said compartments in overlying relation to said inner cover section, a front flap hinged to said outer cover section at its front edge, and a tab on said front flap for removable insertion in a slit formed in said carton front wall.

6. A construction as described in claim 5, in which said outer cover section, when closed, is spaced substantially above said inner cover section to provide a merchandise-receiving compartment between the two cover sections.

7. A construction as described in claim 5, in which said outer cover section, when closed, lies substantially against the top of said inner cover section.

8. A carton for eggs or the like, comprising a one-piece blank cut, scored and folded to provide front and back walls and partition means subdividing the space between said walls into a series of article-receiving compartments, an inner cover section for overlying said compartments and having a plurality of inspection openings through which articles within said compartments may be seen but may not be removed, said inner cover section being hinged along one edge adjacent to one of said walls, interlocking tab and slit means associated with an opposite edge of said inner cover section and the other of said walls for holding said inner cover section against opening except by tearing, an outer cover section for overlying said inner cover section in spaced relation thereto to leave a merchandise-receiving compartment between said inner and outer cover sections, and means for releasably holding said outer cover section in closed position.

WILLIAM H. INMAN.