April 10, 1934. C. H. GOODYEAR 1,954,202

CRUSH RESISTING EGG CARTON

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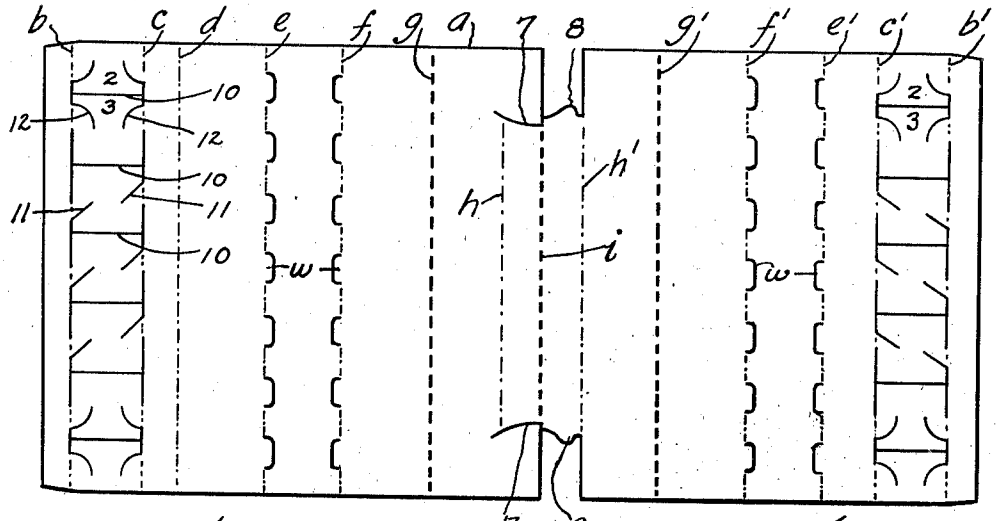


Fig. 1.

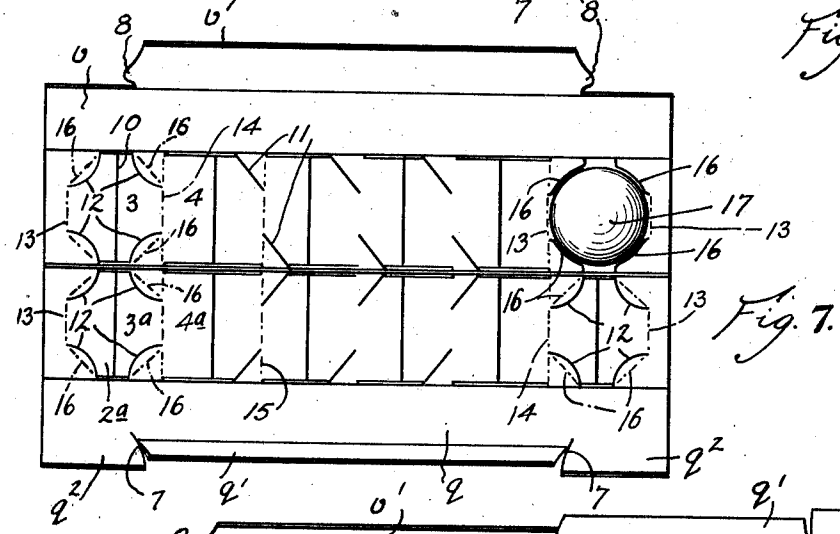


Fig. 7.

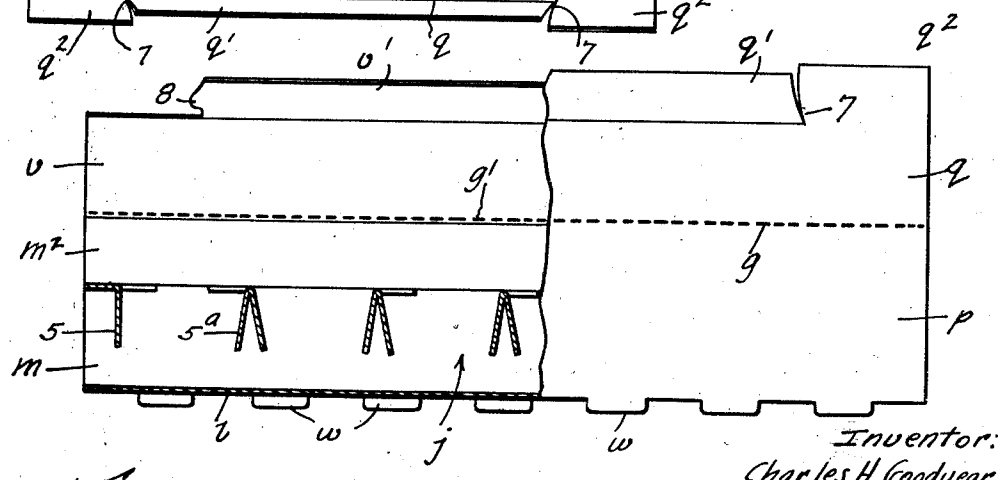


Fig. 6.

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Fig. 4.

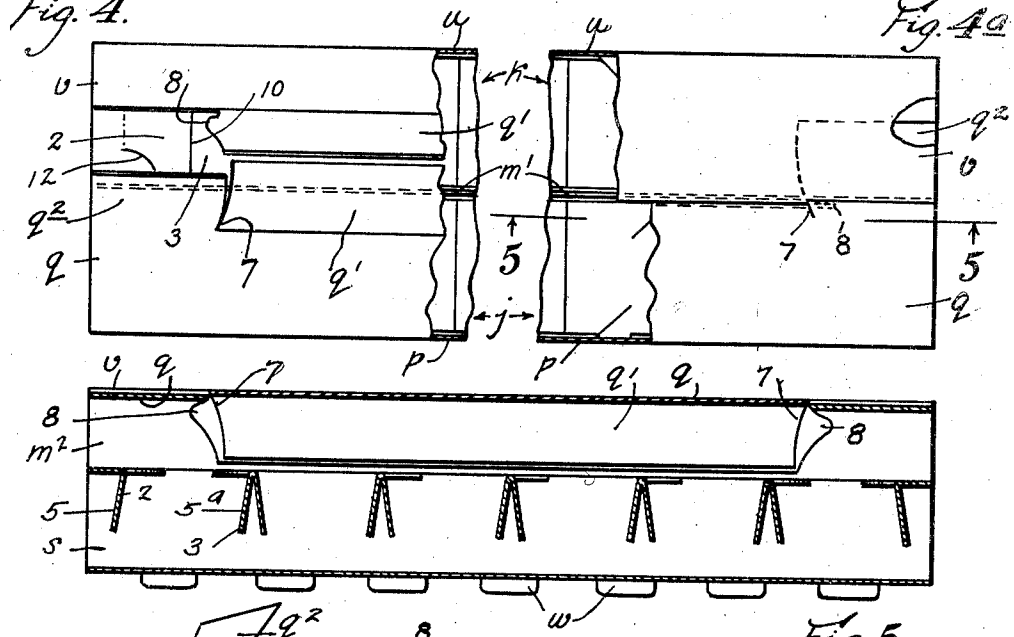


Fig. 4a

Fig. 5.

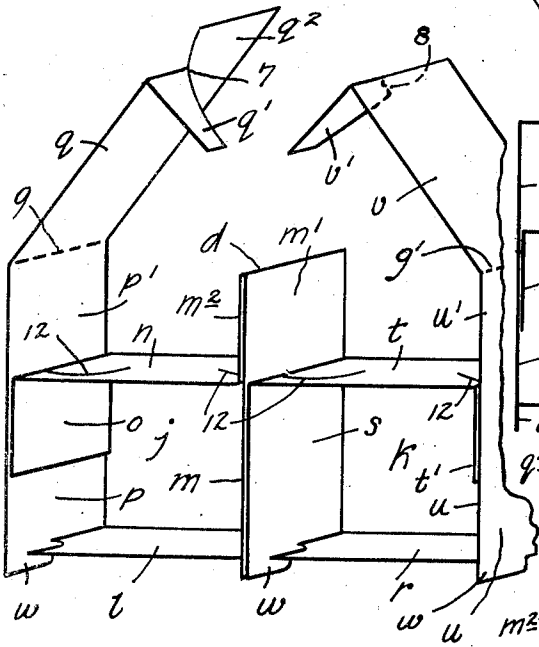


Fig. 2.

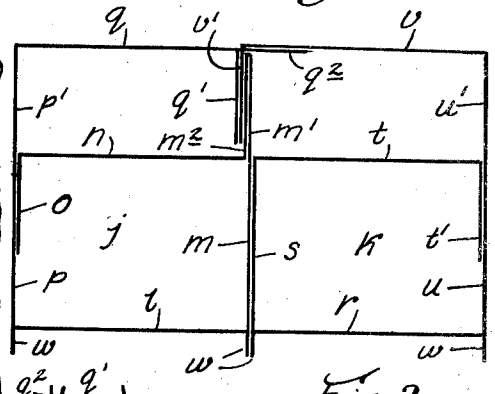


Fig. 3.

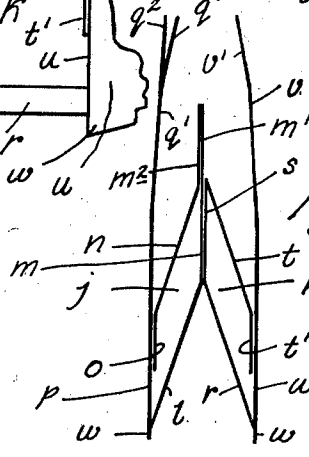


Fig. 8.

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UNITED STATES PATENT OFFICE

1,954,202

CRUSH RESISTING EGG CARTON

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Application March 29, 1933, Serial No. 663,313

2 Claims. (Cl. 229—29)

This application is a continuation in part of the application for patent for improvement in Crush resisting carton, filed by me October 20, 1930, Serial No. 489,903.

With the present reduced prices in all commodities, it is necessary to keep the cost of containers very low. Hence, while better containers, such as by their sturdiness provide safety in handling, shipment and stacking, are desirable, nevertheless, price must receive first consideration.

The object of my invention is to provide a sturdy, but relatively inexpensive carton, composed of trays especially suitable as a container for eggs. To provide a carton made of single pasteboard blank, the carton to include a cover, and to be so constructed as to resist longitudinal wracking, and to embody a truss-like member, by which to support the cover firmly against crushing down under the weight of overlying cartons when stacked in a tier; also to provide improved means for holding the eggs firmly in the tops of the compartments of the carton.

I attain my object by extending the sides of the body above the body of the carton, providing the sides with integral cover-sections, and incorporating in the body of the carton a longitudinally extending middle, truss-rib; and by arranging the cover-sections so as to be interlocked with each other and with said middle truss-rib, whereby to render the carton so rigid as a whole as to resist wracking longitudinally; also to prevent the crushing down of the cover-section of the carton by the weight of other loaded cartons placed on it.

The above mentioned features of my carton and the details of its construction are hereinafter fully described with reference to the accompanying drawings.

In such drawings:

Fig. 1 shows the blank by which my carton is made;

Fig. 2 shows a diagrammatic end view of my carton with the body set up, and the cover-sections still open;

Fig. 3 shows a diagrammatic end view similar to Fig. 2, but with the cover-sections closed; the cover-sections being interlocked with each other and with the middle truss-rib of the body of my carton;

Fig. 4 shows a left end, partial top view, with the cover-sections still open;

Fig. 4*a* shows a right end, partial top view, with the cover-sections closed and interlocked with each other and with the middle truss-rib of the body of the carton;

Fig. 5 shows a longitudinal vertical section on the line 5—5 of Fig. 4*a*;

Fig. 6 shows in its right end portion a side elevation of my carton, and in its left end portion, a longitudinal vertical section with the cover-sections still in open position;

Fig. 7 shows a top view of my carton with the cover-sections turned back; and

Fig. 8 shows a diagrammatic end-view of my carton, illustrating the mode in which it is folded flatwise for shipment, and is to be opened for use.

My carton is made from a blank *a*, shown by Fig. 1, having a series of transverse parallel scores or creases, as *b*, *c*, *d*, *e*, *f*, *g* and *b'*, *c'*, *e'*, *f'*, *g'*, at the lateral ends, and further creases *h*, *h'* across its middle portion; and further is partly slitted at *i* so that the finished blank *a* may be separated on the line *i* into two parts—one part located at the left of such line, the other at the right thereof—, each part set up separately, and then the two parts fastened together as mentioned later.

In setting up the carton, the blank is first folded inwardly at its ends on said scores to the form illustrated by Fig. 2, thus forming two trays *j*, *k* side by side.

The left hand tray *j* comprises a bottom *l* and interior side *m* having a portion *m'* extending above the top *n* and folded on the score *d* over against itself, as shown by *m*2, and top *n* having a downwardly extending lip *o*. The tray further has an exterior wall *p* having an extension *p'* above the top *n*, and a cover-section *q* provided with a lip *q'*. The portions *m'*, *m*2 of the interior wall projecting above the top *n* are glued together, and the lip *o* of the top *n* is glued to the exterior wall *p*.

The tray *k* comprises a bottom *r*, an interior side *s*, a top *t* provided with a lip *t'*, and an exterior side *u* having an extension *u'* above the top *t*, and having further a cover-section *v* provided with a lip *v'*. The lip *t'* of the cover section *t* is glued to the exterior side *u*.

The interior walls or sides *m*, *s* of the trays *j*, *k* are glued together.

The projecting portions *m'*, *m*2 of the interior wall or side *m*, of the tray *j*, constitute a medial truss-rib. The blank *a* further has tabs *w* cut therein which, when the trays *j*, *k* are set up, project below the bottom of the two trays and serve as feet on which to stand the carton with its bottom spaced above the supporting surface.

In the blank *a*, shown by Fig. 1, the portions to constitute the tops *n*, *t* of the trays, as shown by Fig. 2, are cut on cross-lines 10, and further have oblique and curved cuts 11, 12, more clearly shown by Fig. 7, so that, after the carton has

been set up, the portions, 2, 2*a*, 3, 3*a* and 4, 4*a*, referring to Fig. 7, may be bent down on lines indicated by 13, 14, 15 in Fig. 7 to form transversely extending partitions, indicated by 5 and 5*a* in Figs. 5 and 6, dividing the trays into a series of individual compartments to contain the eggs.

The outer ends of the cover sections *q*, *v* are respectively provided with elements 7, 8 for interlocking the same, more clearly illustrated in Figs. 2 and 4.

After the carton has been packed, the cover-sections *q*, *v* are brought down so as to place their ribs *q'*, *v'* in abutment with the projections *q*2 of the cover-section *q* resting on the truss-rib *m'*; and thus the cover-section *q* supports the cover-section *v*, as shown in Fig. 3. The ends of the cover-sections are then interlocked in abutment with each other and with said medial truss-rib *m'* by arranging the lip *v'* of the cover-section *v* of the tray *k* over the truss-rib, as illustrated by Fig. 3. Thus, any weight which may be imposed upon the carton would be distributed by the cover-sections over the inner and outer wall or sides *p*, *u* and said medial truss-rib *m'*. In that way, the imposed weight is prevented from crushing the cover down and injuring the contents of the carton.

The said medial truss-rib *m'* also enables the carton to be handled in the form of a tray by the housewife. To facilitate such handling, the cover-sections *q* and *v* may be torn off along their scores *g*, *g'*.

The folding together of my carton flatwise for shipment and the opening of the same for setting it up for filling is illustrated by Fig. 8.

The blank portions forming the tops of the end compartments, of the trays of my carton, are preferably provided at the four corners with convex, projecting tabs as 12, adapted to become bent down, on the lines indicated by 16 in the left hand end of Fig. 7, by the insertion of the egg in this compartment. Thus said tabs 12 will bear against the inserted egg so firmly as to hold it in place against falling out in the handling of the carton. This is due to the fact that the tabs 12 by the insertion of an egg are forced to assume a curved form on the diagonal lines 16, thereby setting up a resilient force in said tabs, which force in reacting causes the tabs to grasp and firmly hold the egg in place, as illustrated by 17 in the right hand end of Fig. 7. The latter egg-holding means may be substituted for the diagonal webs 11, throughout the trays if preferred.

I claim:

1. A carton comprising two tray sections, side by side, one thereof comprising a bottom, two sides, and a top integral with the interior side, the latter folded back upon itself and arranged to provide a longitudinal medial truss-rib above the top, the exterior side extended above the top to provide one cover section, the other tray section comprising a bottom, two sides and top with the exterior side extended above the top to provide the other cover section; the outer ends of the top of each tray section secured to the exterior sides of the trays, respectively, said cover sections respectively provided with abutments at their ends, and with interlocking elements, whereby said cover ends may be interlocked with each other and with said truss-rib.

2. A crush resisting container consisting of a blank provided at its lateral ends with parallel scorings adapted for folding such ends, respectively, into two trays, side by side, of rectangular cross section, with the interior wall of one tray extended and arranged to constitute a longitudinal medial truss-rib above the top, said lateral ends being slitted to provide partially detached portions adapted to be arranged perpendicular with the plane of the blank, whereby to form in said trays a series of transverse partitions and end closures connected respectively by integral webs with the sides of the trays, the portions of said blank between said scorings of the lateral ends being adapted to be severed on a longitudinal middle line and being longitudinally scored, whereby to be folded to constitute cover-sections integral with the exterior walls of said trays respectively, with the ends of the cover sections foldable into ribs adapted to be placed in abutment when the cover-sections are closed, and means for interlocking the ends of said cover-sections with each other and said medial truss-rib.

CHARLES H. GOODYEAR.