Jan. 18, 1927. 1,614,972

A. W. SCOTCHER

CARTON

Filed July 31. 1926 3 Sheets-Sheet 1

Fig. 1.

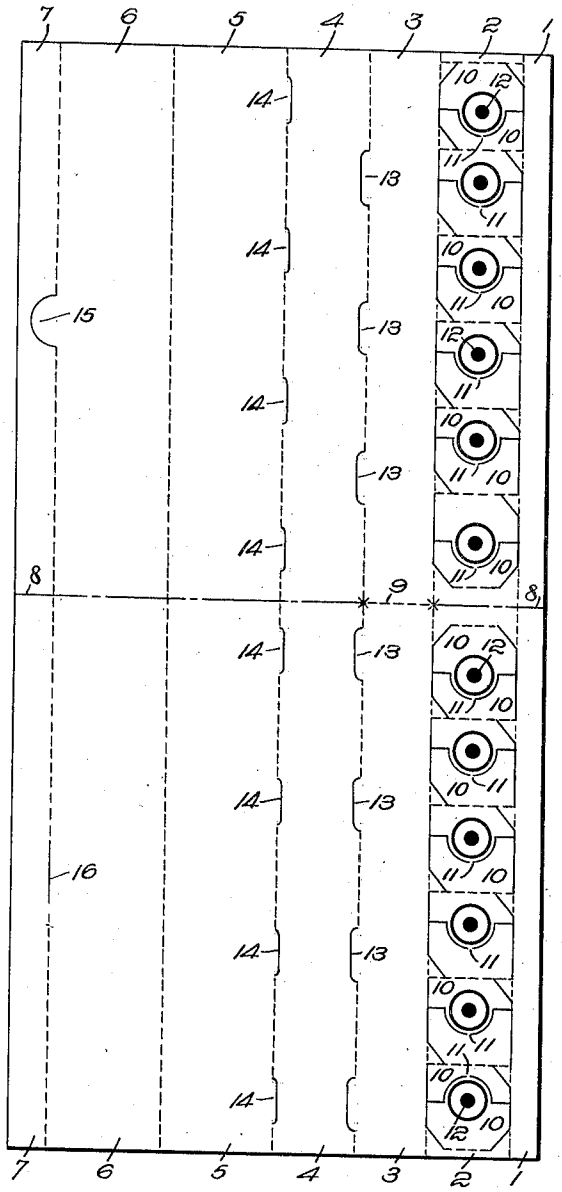


Fig. 2.

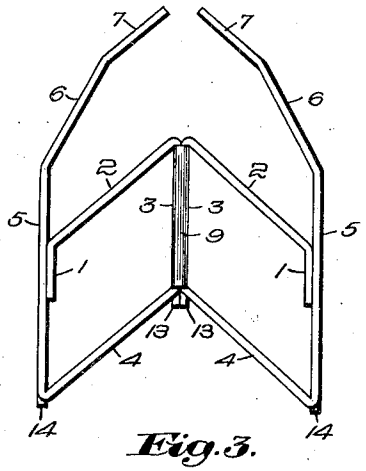
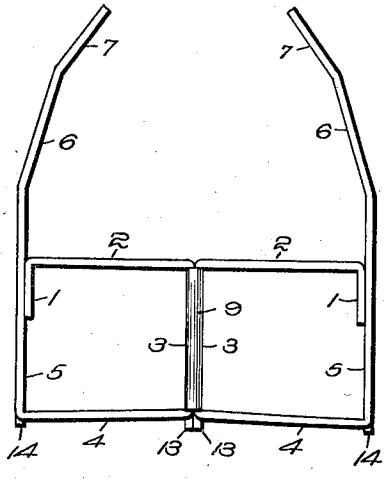


Fig. 3.



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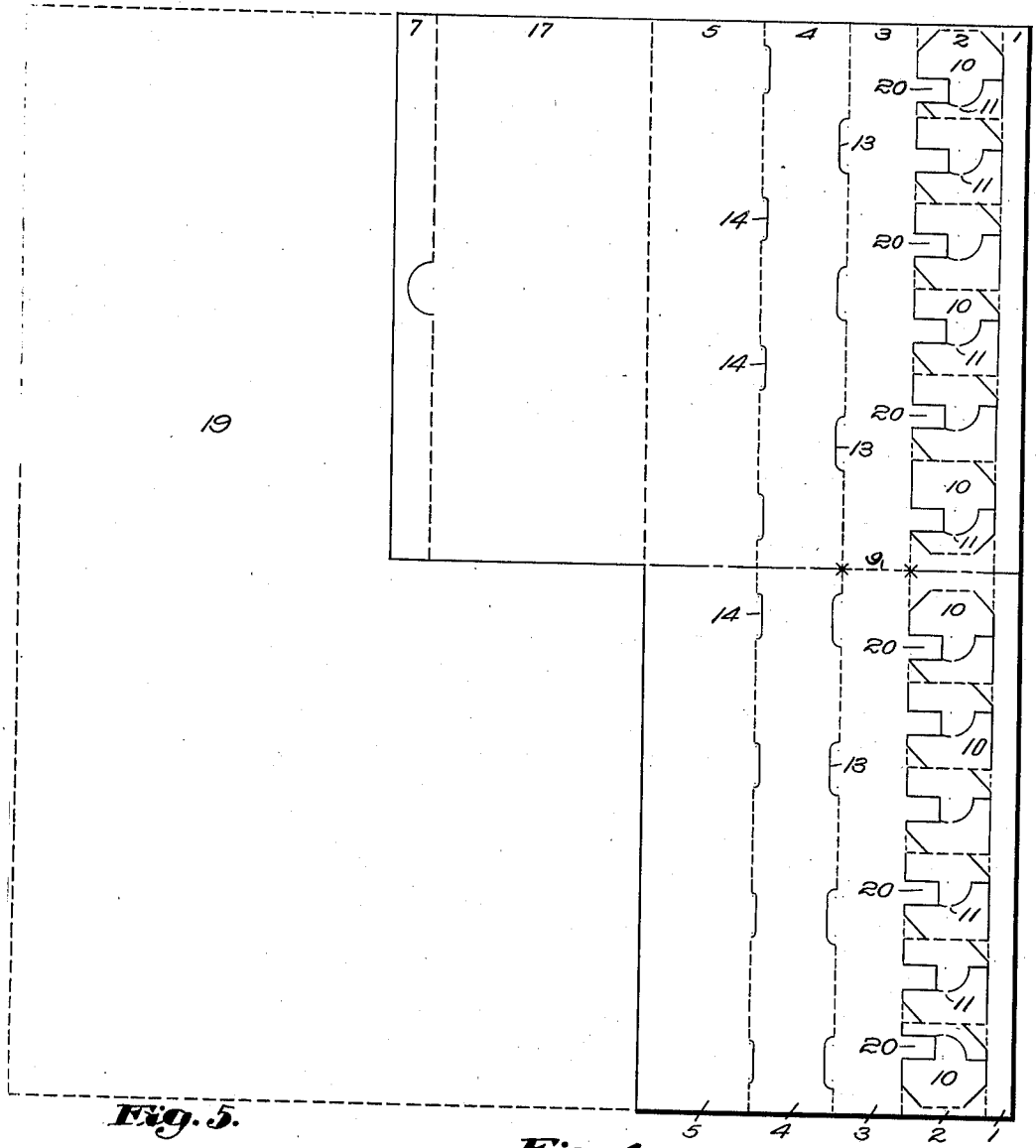
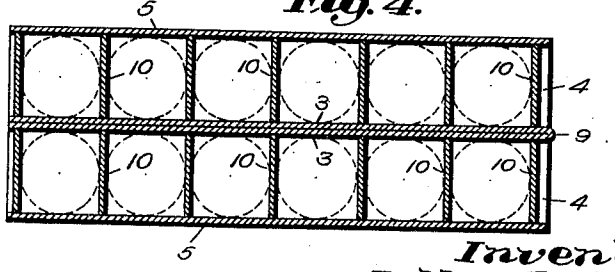


Fig. 5.

Fig. 4.



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Fig. 6.

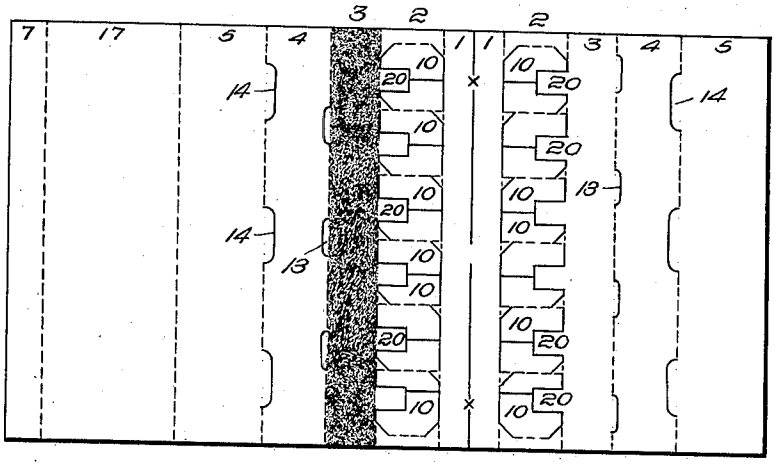


Fig. 7.

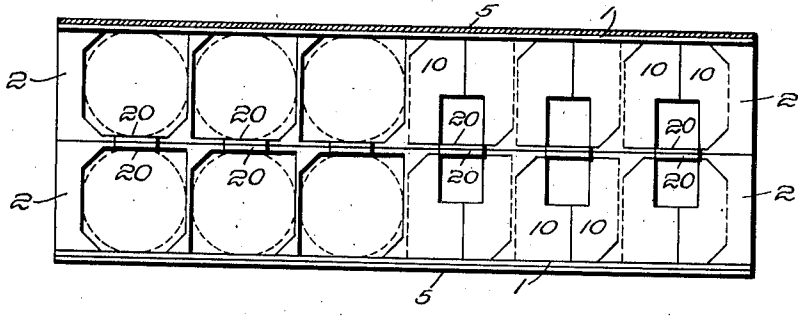
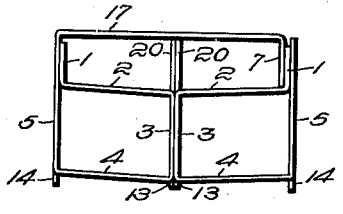


Fig. 8.



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Patented Jan. 18, 1927. 1,614,972

UNITED STATES PATENT OFFICE.

ARTHUR W. SCOTCHER, OF NUTLEY, NEW JERSEY.

CARTON.

Application filed July 31, 1926. Serial No. 126,103.

My present invention aims to provide an improved carton or container for fragile articles, such as eggs. In certain respects it constitutes an improvment upon the device disclosed in the United States Patent #1,540,369 granted to me on June 2, 1925. The present aplication is a continuation in part and as to all common subject matter of my copending application, Serial No. 714,017, filed May 17, 1924.

In the accompanying drawings illustrating certain embodiments of my invention:

Fig. 1 is a plan of the marked and cut but unfolded blank in accordance with one form of the invention;

Figs. 2 and 3 are end elevations illustrating two positions of the carton parts during setting up or filling of the same;

Fig. 4 is a horizontal longitudinal section through the lower portion of a filled carton;

Fig. 5 is a view corresponding to Fig. 1, illustrating a modification,

Fig. 6 is a view, corresponding to Fig. 1, of a further modification;

Fig. 7 is a horizontal section taken just below the cover of the carton of Fig. 6 in its set-up position, and

Fig. 8 is an end view of the same.

Referring more particularly to the drawings and first to Fig. 1, the rectangular or substantially rectangular blank of suitable material, such as cardboard, there shown, is divided longitudinally of the material illustrated to provide a plurality of strips or strip-like portions, as indicated by the dotted lines. Reading from right to left in said Figure 1, said portions include, in order, the securing strips or glue-laps 1, 1, the partition platforms or transverse partition-forming members 2, 2, the longitudinal vertical partitions 3, 3, the bottoms or floors 4, 4, the outer sides 5, 5, the covers 6, 6, and the cover flaps or tucks 7, 7. The dotted lines defining said portions indicate scores or creases for folding.

The blank illustrated comprises two main sections which are identical or substantially so and in which the corresponding portions are arranged end to end, in continuation each of the other. As indicated by the line 8, 8, extending transversely of the blank at substantially its midlength, said main sections are cut apart or perforated at the adjoining ends of each of the pairs of strip-like portions, with the exception of the longitudinal vertical partitions 3, 3. The adjoining ends of said portions 3, 3, are left integrally united, as indicated at 9 by the dotted line, extending between the cross marks at opposite side edges of said portions.

The platform portions 2, 2, are preferably cut and creased or scored substantially in the manner illustrated and as indicated by the full and dotted lines, leaving cross pieces or braces at the ends of each of said portions and dividing the balance thereof into a series of flap-like spacers or transverse partitions 10, 10. Said spacers are arranged in pairs adapted for folding down on the transverse dotted lines, being cut along the full lines. The adjoining cut edges of each pair of spacers preferably are joined by an uncut portion, forming unions or nicks 11 whereby the flaps are retained in their original plane until the carton is to be filled.

Said flaps are desirably of substantially the form shown, one member of each pair having a projecting portion mating with a correspondingly formed recess in the adjoining member. Said projecting portions when turned down to form the cell walls or transverse partitions are adapted to engage and brace against the carton floor. Preferably I provide substantially centrally of each cell suitable indicating means such as the targets or like markings 12, 12, etc. to distinguish the individual cells and to designate the preferred point for applying pressure to the flaps to cause them to separate and turn down to form the cell partitions in filling the carton.

In forming the carton from the blank each securing flap 1 is brought around and placed flatwise against the inner face of the outer side portion 5 of the same carton section, in a manner which will readily be understood from Figs. 2 and 3, and is adhesively or otherwise secured in said position. The blank as shown in Fig. 1 is to be folded away from the viewer, along the lines defining the several strip-like portions. During said fastening of the securing flaps the two main sections remain in alignment with each other, being folded up and secured in the manner described into a tube-like formation with laterally projecting cover element, appearing in end elevation substantially as a vertical half section of the complete carton as shown in Fig. 3.

The two main sections are then brought

around together, folding on the line 9 at the adjoining ends of the vertical partitions 3, 3, said operation being permitted by reason of the cutting or perforation along the balance of the line 8, 8 separating the two sections. Said vertical partition portions 3, 3 are brought flatwise against each other, see Fig. 4, and secured in said position in any suitable manner, as by gluing. The carton so formed comprises a plurality of rows of cells, one row being provided by each main section of the blank. It may be collapsed, so long as the partition flaps 10 remain in their original position, into flat condition for packing and shipment. A carton in partially opened condition is illustrated in Fig. 2, from which it will be apparent that it may readily be set up or opened for filling merely by pressing down upon the central vertical members 3, 3.

The carton bottom is preferably, but not necessarily, of a broad V-shape in cross section when in open position, being inclined in one or the opposite direction from its side edges toward the vertical partition; as illustrated in Fig. 3, said inclination is upward from the side edges. Said formation facilitates the provision of cushioning means for the bottom without materially varying the standard height for cartons of this class.

Referring again to Fig. 1, I form along the lower or left hand edges of the vertical partitions 3, 3, supporting or cushioning means integral with said partitions, and herein comprising a plurality of spaced feet or lugs 13, 13, etc. In setting up the carton said feet are automatically thrown down into position to support the bottom along its longitudinal medial section, holding it out of contact with the surface upon which the carton may rest. Said automatic positioning of the bottom supporting or cushioning means is due largely to the described provision of an integral element or elements, herein the feet or lugs 13, 13, etc. remaining at all times in the same plane with the vertical partitions 3, 3, since the score or crease dividing said partitions from the bottom portions is not carried across said feet or lugs. Said cushioning formations may be distributed longitudinally of the carton in any desired manner, and in the present instance I have shown those of one main section so arranged with relation to those of the other section that they will assume staggered or offset positions with respect to each other in the formed carton, one main section, the upper section in Fig. 1, being provided with three feet spaced to come between four similar formations on the other section when said sections are folded together. If desired, similar cushioning formations 14 may be provided along the lower edges of the outer side members 5. Said latter formations may have the same or a different height than that of the central feet 13, and may be spaced in any suitable manner.

Suitable interlocking means for holding the cover element closed may be provided, and for this purpose I have indicated in Fig. 1 a tongue or tab 15 at the outer edge of one cover portion 6 and adapted to be received within a corresponding slit 16 in the cover portion of the other section.

In some instances I may form the cover as a single element hingedly attached to the outer side of one carton section only. Such construction is illustrated in Fig. 5, wherein all parts not otherwise referred to may be the same as in the figures previously described, including indicators 12. In said figure a cover 17 of a width sufficient to overlie both rows of cells in the formed carton is hingedly attached as at 18 to one only of the carton sections. In forming the blank for cartons so constructed I avoid any wastage of stock by arranging succeeding blanks in opposed relation, as indicated by the large dotted area 19 in said Fig. 5. It will be noted that the cover for the second blank is thus placed in alignment longitudinally of the carton portions with the cover for the first blank, and the entire stock is thus utilized.

The described bottom cushioning means, the indicators for the individual cells, and the single piece hinged cover may likewise be employed in a carton formed from a blank wherein the several portions are positioned side-by-side, as in my patent above mentioned, rather than end-to-end as shown in Figs. 1 and 5. Such construction is illustrated in Figs. 6–8, wherein I have also shown a novel means for supporting a single piece hinged cover intermediate the carton sides, preventing it from making contact with the enclosed contents. This feature may also be embodied, if desired, in a carton formed from a blank as in Fig. 5.

Referring to said Figs. 6–8, wherein parts not specifically mentioned may be similar to those of the other figures, the longitudinal, substantially vertical and central partition 3, 3 includes at its upper portion means projecting above the platforms 2, 2 providing the transverse partition-forming elements or cell separators 10, 10, etc., and adapted to support the cover 17 intermediate the carton sides 5, 5. As illustrated, said means, which is preferably integral with said central partition, includes a plurality of uprights, supports, or lugs 20, 20, etc., cut out from the partition platforms 2, 2 at their edges adjoining the respective central partition portions 3, 3. Said supports are thus integral with the central partition, and, having no crease or score across their juncture with said partition, remain always in substantially the same plane with the latter and thus

automatically assume their cover supporting position when the carton is set up. Said uprights or supports, of which any preferred number may be employed, may be distributed lengthwise the carton as desired, but preferably those on one of the main carton sections are positioned opposite corresponding ones on the other carton section, so that in setting up the carton said uprights will be in pairs, flatwise against each other, thus affording extra rigidity for the cover support. The described means is effective to prevent undue pressure or contact of the cover means with the carton contents.

If desired additional pieces similar to the lugs 20 may be formed at the outer side walls 5, 5 opposite the respective lugs 20 or some of them and cut out from the cell separators 10, 10 etc. in a similar manner as said lugs 20, 20, said pieces being projected either up or down, thus leaving an open space completely across each cell substantially centrally thereof when the carton is set up and before the contents are inserted.

My invention is not limited to the particular forms thereof herein illustrated and described, its scope being pointed out in the following claims.

Claims.

1. A cellular carton comprising a plurality of main sections, each providing a row of cells, said sections being adapted for formation from a single blank, and each including a series of parallel strip-like portions to form outer sides, bottoms, longitudinal vertical partitions, and transverse-partition platforms, the strip-like portions of one section being positioned in the blank end-to-end with the corresponding portions of the other section but, excepting only said longitudinal vertical partitions, being separable from each other, whereby the two sections may be formed up in alignment with each other and subsequently folded together on the joining line of said longitudinal vertical partitions, bringing the latter flatwise against each other, and hinged cover means on the outer side of at least one of said sections.

2. A cellular carton comprising a plurality of main sections, each providing a row of cells, said sections being adapted for formation from a single blank, and each including a series of parallel strip-like portions to form outer sides, bottoms, longitudinal vertical partitions, and transverse-partition platforms, and hinged cover means along the upper edge of the outer side of at least one of said sections, said sections being integrally united at one of the adjoining end portions of said vertical partitions and secured together with said vertical partitions flatwise against each other.

3. A cellular carton comprising a plurality of main sections, each providing a row of cells, said sections being adapted for formation from a single blank, and each including a series of parallel strip-like portions to form outer sides, bottoms, longitudinal vertical partitions, and transverse-partition platforms, at opposite sides of, and integral with, said vertical partitions, the formed sections being positioned side by side with said vertical partitions flatwise against each other, said vertical partitions having along their bottom edges a plurality of integral downwardly extending, longitudinally spaced formations adapted to support the carton bottom along its longitudinal medial section out of contact with a supporting surface.

4. A cellular carton comprising a plurality of main sections, each providing a row of cells, said sections being adapted for formation from a single blank, and each including a series of parallel strip-like portions to form outer sides, bottoms, longitudinal vertical partitions, and transverse-partition platforms, at opposite sides of, and integral with, said vertical partitions, the formed sections being positioned side by side with said vertical partitions flatwise against each other, said partitions having along their bottom edges a plurality of integral feet cut from the stock of the adjoining bottom portions and adapted to support the bottom along its longitudinal medial section out of contact with a supporting surface, said feet, due to their said integral construction as downward extensions of said vertical partitions, being automatically thrown down into bottom cushioning position upon opening of the collapsed carton for use.

5. In a cellular carton having bottom and opposite side walls, hinged cover means, a longitudinal, vertical and substantially central partition, and transverse partition-forming elements on opposite sides of, and integral with, said vertical partition to provide a plurality of rows of cells, said vertical partition having along its lower portion downwardly projecting, integral means effective to cushion and support the carton bottom out of contact along its longitudinal medial section with a surface on which the carton may be positioned.

6. A cellular carton comprising a plurality of main sections, each providing a row of cells, said sections being adapted for formation from a single blank, and each including a series of parallel strip-like portions to form outer sides, bottoms, longitudinal vertical partitions, and transverse partition platforms, at opposite sides of, and integral with, said vertical partitions, the formed sections being positioned side by side with said vertical partitions flatwise against each other, said partitions having along their bottom edges downwardly extending formations integral therewith adapted to support the bottom along its longitudinal medial section out

of contact with a supporting surface, and a row of like cushioning formations along the bottom edges of the outer side portions.

7. In a cellular carton having bottom and opposite side walls, hinged cover means, a longitudinal vertical and substantially central partition integral with the bottom wall and transverse partition forming elements at opposite sides of said vertical partition and integral therewith to provide a plurality of rows of cells, said bottom wall having along its longitudinal medial section a plurality of longitudinally spaced feet integral with said central partition and constituting cushioning means for the carton bottom.

8. In a cellular carton having bottom and opposite side walls, a longitudinal, vertical and substantially central partition of less height than said side walls, transverse partition forming elements integral with and at opposite sides of said vertical partition to provide a plurality of rows of cells, and a cover element adapted to overlie both said rows and hinged at the upper edge of one side wall, said vertical partition having at its upper portion integral, upwardly projecting means adapted to engage and support said cover element, when closed, intermediate the carton sides.

9. In a cellular carton having bottom and opposite side walls, a longitudinal, vertical and substantially central partition of less height than said side walls, transverse partition forming elements integral with and at opposite sides of said vertical partition to provide a pluarlity of rows of cells, a cover element adapted to overlie both said rows and hinged at the upper edge of one side wall, and a series of longitudinally spaced uprights 20 along the upper edge of said vertical partition and cut out from said transverse partition forming elements, said uprights being adapted to support the cover element, when closed, intermediate the carton side walls.

In testimony whereof, I have signed my name to this specification.

ARTHUR W. SCOTCHER.