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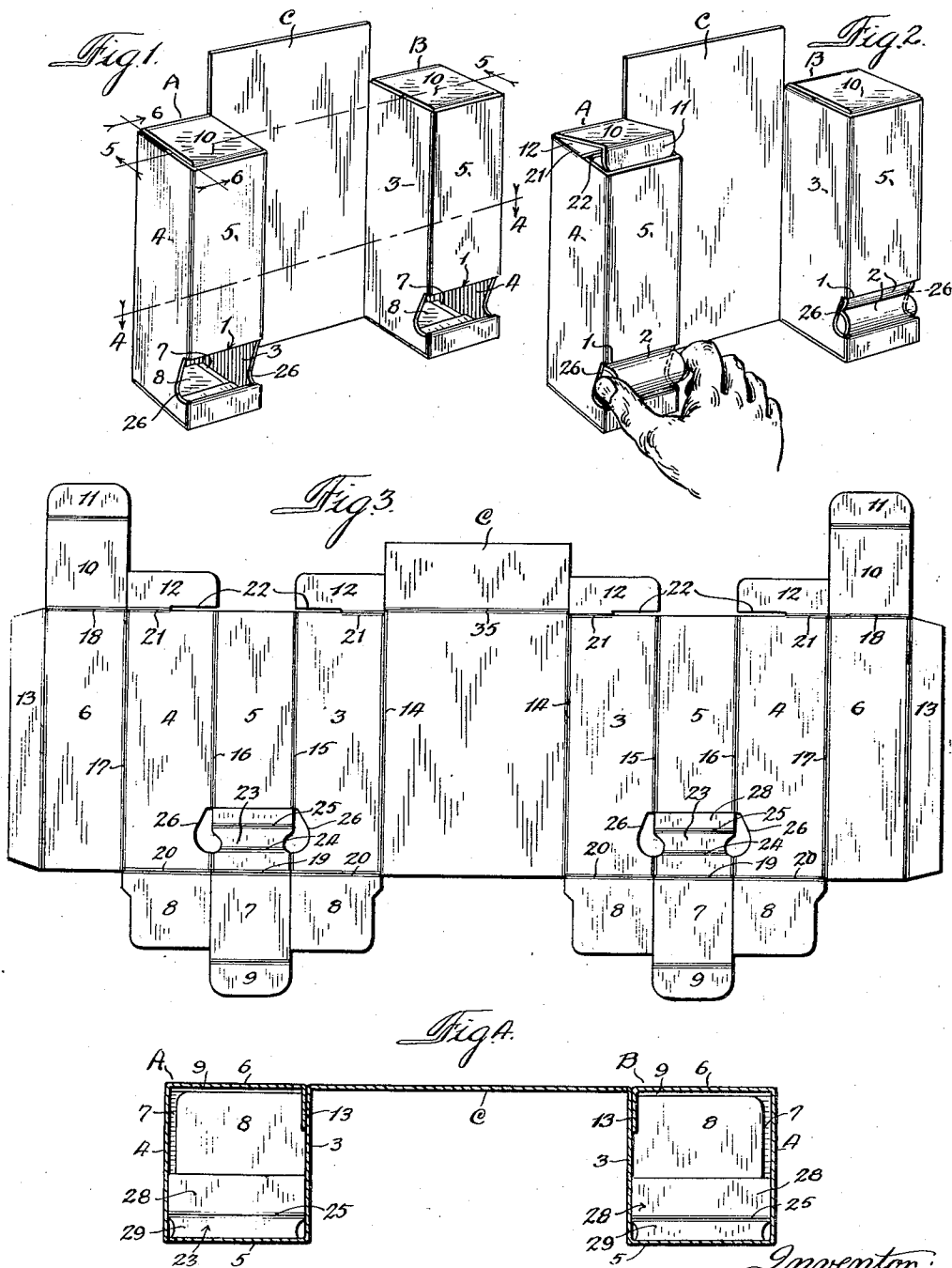
E. J. NOVAK

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DISPLAY CARTON

Filed March 20, 1940

2 Sheets-Sheet 1



Inventor:
Edward J. Novak.
By: *[Signature]*
Attys:

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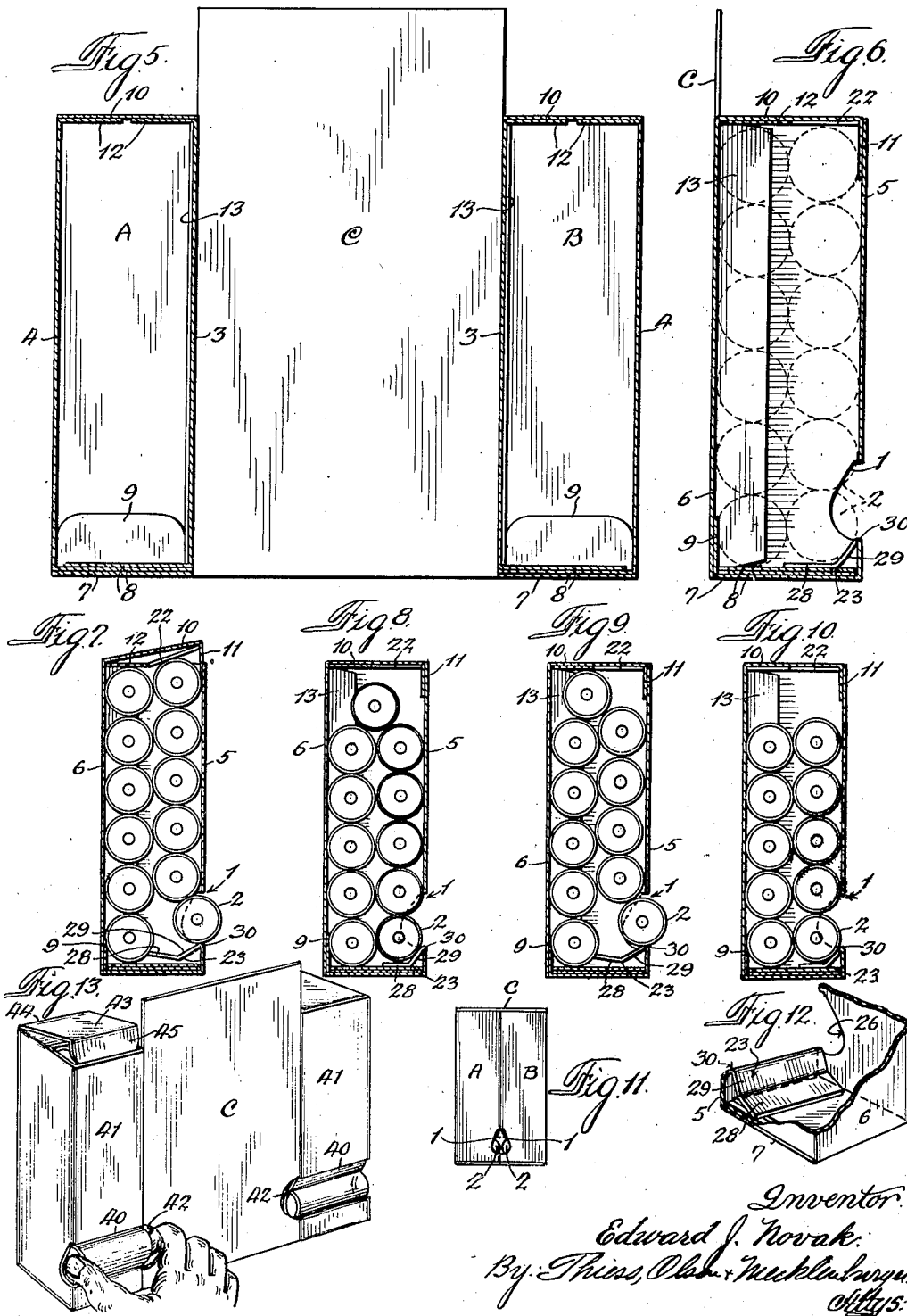
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Inventor:
Edward J. Novak.
By: Thins, Olan & Neuklun
Attys.

UNITED STATES PATENT OFFICE

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DISPLAY CARTON

Edward J. Novak, Chicago, Ill.

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4 Claims. (Cl. 312-42)

My invention relates to the construction of cartons. More particularly, my invention has reference to a carton having for its general purpose not only the shipping of articles contained therein, but also the displaying and dispensing of the same in a manner greatly increasing the value of the carton and making it particularly adaptable to display articles in a way to make them readily dispensable from the carton by the customer, if so desired.

Briefly, my invention distinguishes from the prior art by an extremely simple, strong and unique construction. A carton embodying the invention is adapted to carry and display a predetermined number of articles preferably in compartments in which these articles may be arranged in a predetermined relation and maintained in this relation as the articles are withdrawn, one by one, preferably at the bottom, whereby the articles cannot be accidentally displaced through the dispensing openings, exposed to the customer and accessible to him, in the event the carton is tipped, nor will more than one article at a time be removed accidentally.

Accordingly, an object of my invention is to provide certain improvements in cartons adapted to carry and dispense articles in a predetermined manner and to embody features of construction that result in a simple, inexpensive and effective structure and permit the ready dispensing of an article by the customer without danger of accidental displacement of additional articles, or the spilling of the entire contents of the carton when it is tipped.

A further object of the invention is to provide a construction of carton that comprises an exceptionally attractive display. Not only may the articles be advantageously displayed without exposing the entire contents to view, but advertising matter may be carried in a manner to attract attention and create an appeal, this being aided by the construction of the carton and the manner in which the parts are arranged.

The construction is simple and permits convenient packing and shipping of each carton in a closed position as a self-contained package that prevents articles from being jarred loose through the dispensing openings.

Other objects and advantages will be apparent from the following detail description taken in connection with the accompanying drawings which form a part hereof.

In the drawings:

Figure 1 is a perspective view of a carton

embodying the invention, the compartments being empty;

Fig. 2 is a similar view of the same carton having its compartments filled and illustrating the removal of an article from one of these compartments;

Fig. 3 is a plan view of the blank from which the entire carton is formed;

Fig. 4 is an enlarged sectional view taken on line 4-4 of Fig. 1;

Fig. 5 is likewise an enlarged sectional view taken on line 5-5 of Fig. 1;

Fig. 6 is also an enlarged sectional view taken on line 6-6 of Fig. 1;

Fig. 7 is a transverse sectional view of the carton illustrating the manner in which articles may be arranged in each compartment and the action of the first row when the lowermost article of a filled compartment is removed;

Figs. 8, 9 and 10 are views illustrating how the second row is automatically self-feeding into the first row as articles are successively removed;

Fig. 11 illustrates a carton in folded position ready for shipping;

Fig. 12 is a fragmentary perspective view of the bottom of one of the compartments to illustrate the construction thereof at the lower edge of the dispensing opening; and,

Fig. 13 illustrates an alternative embodiment of the invention.

Although the dispensing carton herein disclosed is uniquely adapted to handle cylindrical shaped articles, it will be understood that articles of other shapes may be used and that certain of the essential features may be adapted without regard to the shape of the articles to be carried and dispensed.

Referring to the drawings and particularly to Figs. 1 and 2, it will be noted that the carton in its entirety comprises a plurality of compartments, designated broadly as A and B, separated by a connecting panel C. Panel C keeps the compartments A and B in spaced relation with respect to each other and provides a better balance for a package of this kind so that it will be maintained in an upright position and prevented from tipping if it should be suddenly jarred or pushed. By this statement I do not intend to be limited to two compartments separated by a connecting panel C because certain features of construction disclosed herein may be used in a carton comprising one of these compartments, if so desired. Each compartment has a display and dispensing opening I adapted to display a substantial portion of, say, the

cylindrical articles designated 2 in Fig. 2, without permitting them to be accidentally displaced, yet allowing one of these articles 2 to be sufficiently gripped at its ends in order to be removed.

Each compartment comprises side walls 3 and 4, a front wall 5, a back wall 6, a bottom 7, cross flaps 8 for bottom 7 which is also provided with a tab 9, a top or cover 10 also having a tab 11, and cross flaps 12 for cover 10. A blank from which the package is made is illustrated in Fig. 3. Bottom 7 is folded along the lower edge of front 5, while cover 10 is folded along the upper edge of back 6. A wing 13 is formed along one of the vertical edges of back 6 for attachment to the inside surface of side 3 of each compartment (see Fig. 4). This attachment may be by gluing or any other suitable means. In forming the blank, panel C is separated by scored lines 14 from side 3 of each compartment. Sides 3 are then separated from fronts 5 by scored lines 15. Similar scored lines 16 separate front 5 from the opposite sides 4. Back 6 is separated from these sides 4 by scored lines 17. Scored lines 18 separate covers 10 from backs 6. Similar scored lines 19 separate bottoms 7 from fronts 5. Tabs 8 are separated from sides 3 and 4 by scored lines 20. Similar scored lines 21 separate these sides 3 and 4 from tabs 12. However, these tabs 12 may be die cut for a limited distance as illustrated at 22, for a purpose to be hereinafter described. Near the lower end of each front 5, a flap 23 is cut and scored at 24 and 25 so that it may be folded inwardly in each compartment, as illustrated in Fig. 12. Forming tabs 23 and bending them inwardly along scored line 24 forms the display and dispensing openings 1. Side walls 3 and 4 are cut slightly backward, as illustrated at 26, to extend these openings 1 into sides 3 and 4 so that a portion of the article ready to be next dispensed, as illustrated in connection with compartment B as shown in Fig. 2, will be exposed whereby it may be manually gripped and removed in the manner illustrated in connection with compartment A.

Compartments A and B are preferably of a size to receive two rows or stacks of articles which may be, for example, flashlight batteries of a diameter that is slightly less than the width of openings 1. Bottom 7 is folded along scored line 19 at the lower end of front 5 and tab 9 is tucked into position along the inside of back 6. Flap 23 is folded inwardly along scored line 24 and turned at scored line 25 so that the forward part 28 rests under the front row of the articles. Hence, the front row of articles is carried slightly higher than the rear row. This relation is clearly shown in Fig. 6 illustrating a carton with two full front and back rows of flashlight batteries. The lowermost battery rests upon flap 23, part 28 receiving the battery, although the latter nests against the inner part 29 thereof which comprises the portion of flap 23 between scored lines 24 and 25. Openings 1 are provided in front walls 5 at a slight distance above the lower end thereof so that the lower edge 30 of these openings 1 extend a slight distance about the lowermost battery or article to prevent it from being pushed outwardly. The weight of the articles resting upon this lowermost article in the front wall causes it to be held rather firmly in nested relation upon flap 23. Flap 23 is slightly flexible and tends to conform its shape to that of the periphery of the lowermost article. Hence, it is impossible for the article next to openings 1 to

drop out, although the carton may be tipped or tilted in an inclined position.

The manner of removing the lowermost article is illustrated in Fig. 2. The cutaway portions 26 in side walls 3 and 4 exposes a sufficient portion of the end faces of the articles as they are fed downwardly into position adjacent openings 1 so that the lowermost article may be gripped between the fingers and lifted upwardly to clear lower edge 30 and then pulled forwardly out of openings 1. If compartments A and B are full, as illustrated in Fig. 6, lifting the lowermost article upwardly to avoid edge 30 will raise the articles of the front row above this lowermost article in a manner illustrated in Fig. 7. The top article in the front row will force cover 10 upwardly. By die cutting cross flaps 12 at 22, a sufficient portion of the forward part of these flaps 12 will yield to the upward movement of said top article and allow top 10 to be raised slightly without causing the parts to bind. The extent cover 10 is raised is illustrated at compartment A in Fig. 2. The proprietor or the customer may then tap cover 10 back into position after the first article is removed. The next article of the first row drops into position as the lowermost article is removed. This is shown in Fig. 8. The top article of the second or rear row then rolls forwardly, this also being illustrated in Fig. 8. Removal of the second article from the front row, as illustrated in Fig. 9, causes the top article of the second or rear row to roll into position as the next top article of the first row. See Fig. 10. This action is continued as each article of the first row is removed from the bottom of either compartments A and B until the entire second row is fed successively to the first row until the lowermost article of the second row remains. This will be removed as the last article from these compartments.

Portion 29 of flap 23 aids in the removal of these articles when they are lifted upwardly to clear lower edge 30 of openings 1. Portion 29 allows these articles to be more or less slid upwardly until lower edge 30 is cleared. In other words, part 29 tends to allow these articles, when in cylindrical shape, to be rolled out through openings 1. As long as there is one of the articles resting upon the lowermost article in the front row, it is impossible for accidental displacement of these articles in the event the carton is tipped or tilted.

The arrangement of the herein described parts of the carton advantageously permits compartments A and B to be folded along lines 14-14 separating panel C from sides 3 so that these compartments may be made to fold against panel C with the front faces 5 against each other as illustrated in Fig. 11, and the top portion of panel C folded upon the covers 10 along line 35, whereby compartments A and B may be filled and the carton shipped in this manner. Openings 1 of compartments A and B will face each other and as long as the compartments are held in folded position upon panel C with their front faces in contactual relation, it will be impossible for any of the articles 2 to be accidentally displaced by rough handling of the carton. It is apparent that the arrangement permits these cartons to be stacked one upon the other in this folded position for shipping purposes whereby to economize in space and securely keep the compartments closed to prevent accidental displacement of the articles.

A variant embodiment of the invention is illustrated in Fig. 13. Openings 40 corresponding to openings 1 are formed in walls 41 corresponding to the rear walls 6 of the embodiment above described. In other words, if it is desirable, the rear walls of the structure shown in Figs. 1 to 12, inclusive, may become front walls 41 and openings 40, similar to openings 1, provided in these front walls 41 to display and dispense articles 2 in the same manner as before. Panel C will be cut away at 42 adjacent each opening so as to allow a finger to extend inwardly in either opening 40 to grip the end face of the article to be dispensed. Another finger may be placed against the opposite end of the article as illustrated in Fig. 13, so that the same may be readily removed by lifting it slightly above the lower edge of opening 40 and pulling it forward through this opening 40. In this event, covers 43, corresponding to covers 10, will be folded along the opposite wall at edge 44 so that it will extend forwardly and down to allow tabs 45 to be tucked into the respective compartments next to the front wall 41, the same as illustrated in Fig. 2. This will permit the covers 43 to yield slightly to the upward movement of the topmost article in the front row as the first article in this front row is lifted upwardly to remove it through opening 40. Covers 43 may then be fully closed again by a slight pressure thereagainst. Thereafter, the articles may be removed without disturbing top covers 43.

The carton shown in Fig. 13 is substantially the same in construction, with the exception that the display and dispensing openings are arranged in the walls of compartments A and B that are co-extensive with panel C instead of the opposite walls which constitute the front walls 5 in the previously described embodiment. Also, top covers 43 are folded in an opposite manner so that they will close adjacent walls 41.

From the foregoing disclosure, it will be apparent that I have provided a simple, inexpensive and efficient form of carton adapted to be made out of a single blank and folded so that only one gluing or securing operation is necessary for each compartment, this being between flaps 13 and walls 3. The cartons advantageously permit dispensing cylindrically shaped articles like flashlight batteries, and to expose a minimum surface of the batteries contained in the compartments so that they will be protected from dust and dirt and thereby retain their appearance of newness, which is quite essential in the marketing of batteries. Moreover, the invention affords providing a package that will permit the packing and shipping of any desired number of articles like batteries, so that the carton containing the same may be allowed to stand exposed upon counters whereby to display the batteries contained therein but still protect the same from unnecessary exposure that causes them to lose the appearance of newness. Moreover, the carton will always expose the next battery to be dispensed but still conceal the number of batteries remaining in each compartment so that sales are not retarded because the customer may observe that he will be purchasing substantially the last of the articles in the carton. This is an important factor in the marketing of batteries. Making the compartments substantially rectangular cross-sectionally allows the packing of two rows of batteries in each compartment, capable of feeding in a novel manner to bring the batteries of the second row forwardly into the front row as the front

row is dispensed and at the same time balancing the weight of each compartment so that it will be held in an erect position without danger of it being easily tipped. This latter feature is greatly facilitated by arranging the compartments in pairs with panel C between the same. Panel C may carry any desirable advertising matter that aids in making the display attractive and creating a sales appeal. Advertising matter likewise may be placed upon the side and front walls of the compartments.

Without further elaboration, the foregoing will so fully explain the gist of my invention that others may, by applying current knowledge, readily adopt the same for use under varying conditions of service, without eliminating certain features, which may properly be said to constitute the essential items of novelty involved, which items are intended to be defined and secured to me by the following claims.

I claim:

1. A carton of the class described comprising a compartment having front, back and side walls, said front wall having an opening therein near its lower end, the side walls being cut back adjacent the ends of said front wall opening whereby a portion of the ends of the articles to be next dispensed from said opening will be exposed sufficiently to be manually gripped so as to remove such articles through said opening, and a flap extending into said compartment at said opening carrying the articles to be next dispensed, said flap being formed by the material cut in forming said opening and being folded back along the lower edge of said opening to present an upwardly sloping surface and a smooth edge to said articles as they are removed whereby to facilitate their removal when manually gripped at the ends thereof and pulled forwardly through said opening.

2. A carton of the class described comprising a compartment having front, back and side walls, one of said walls having an opening therein near its lower end, the adjacent walls being cut back adjacent said opening whereby a portion of the ends of the articles to be next dispensed from said opening will be exposed sufficiently to be manually gripped so as to remove such articles through said opening, and a flap formed from the material cut in forming said opening, said flap being folded back into said compartment along the lower edge of said opening and presenting an upward sloping surface and a smooth edge to said articles as they are removed whereby to facilitate their removal when manually gripped at the ends thereof and pulled forwardly through said opening.

3. A carton of the class described comprising a compartment having front, back and side walls, a bottom upon which said compartment sets in an upright position, a cover therefor, said front wall having an opening therein near its lower end for displaying articles to be dispensed there-through, the lower edge of said opening being slightly elevated above said bottom whereby the lowermost article in said compartment must be raised to clear said elevated lower edge in order to be removed through said opening, said cover being a continuation of said back wall and folded to extend forwardly over said compartment, a tab on the free edge of said cover, a flap on each side wall adapted to lie under said cover when closed, said tab being inserted between the front edges of said flaps and said front wall, the fold of said flaps being slitted a predetermined dis-

tance to permit the cover to raise slightly when the lowermost article is the first to be removed and the articles above the same are raised by the raising of this first article in order to remove the same.

4. A carton of the class described comprising a compartment having a wall provided with an opening therein through which articles in said compartment may be removed, the lower edge of said opening being slightly elevated above the

floor of said compartment whereby the lowermost article therein must be raised in order to be removed through said opening, a cover for said compartment, and means whereby said cover may yield when the lowermost article is the first to be removed from said compartment and the articles above the same are raised by the raising of the first article in order to clear said lower edge of said opening.

EDWARD J. NOVAK,