Feb. 7, 1967 J. W. HENRY 3,302,844

CARTON

Filed April 13, 1964

Fig. 1.

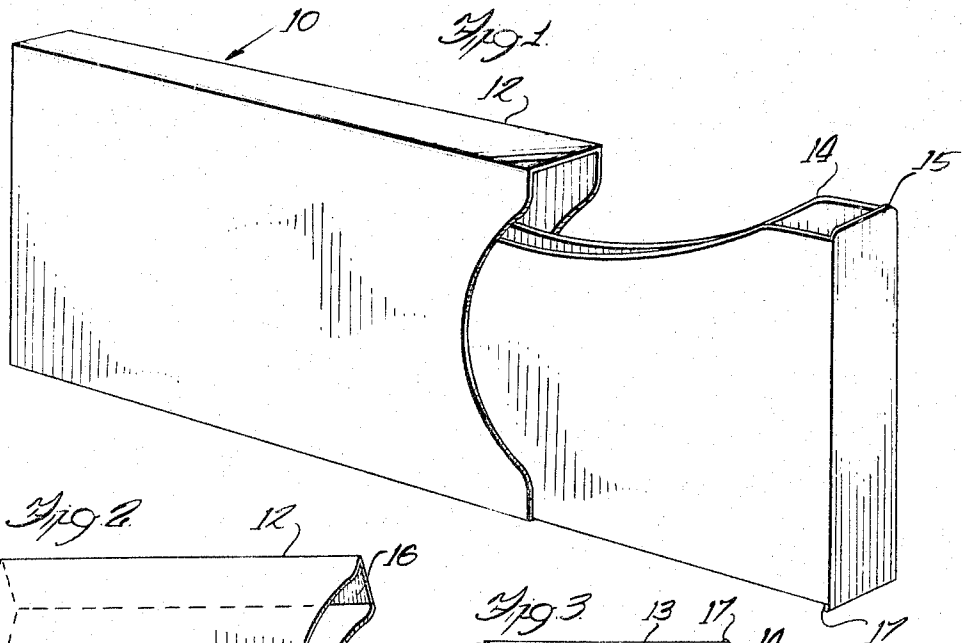


Fig. 2.

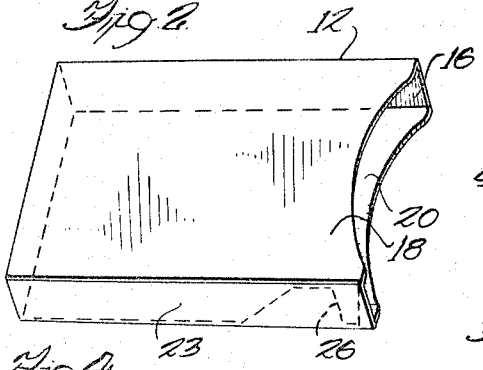


Fig. 3.

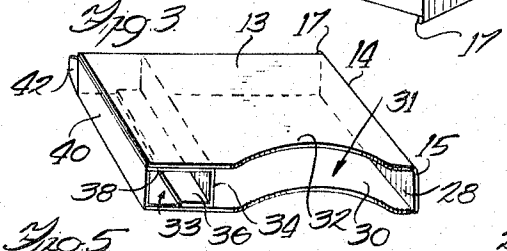


Fig. 4.

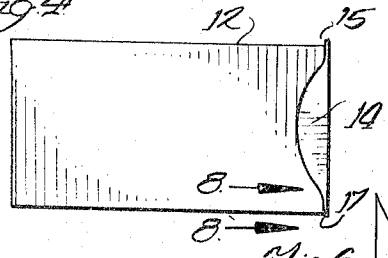


Fig. 5.

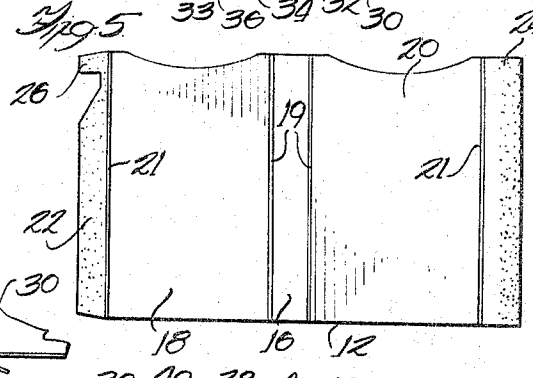


Fig. 6.

Fig. 7.

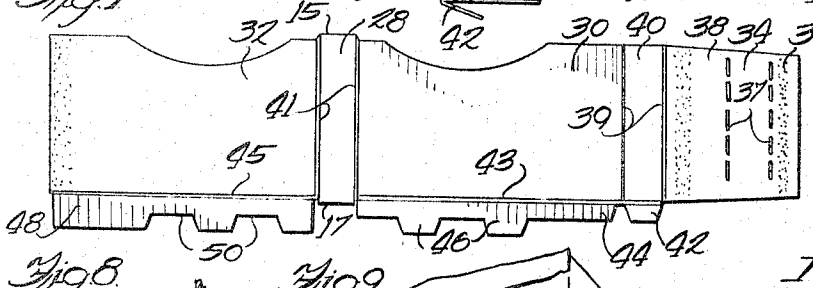


Fig. 8.

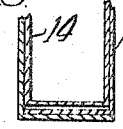
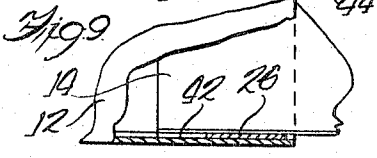


Fig. 9.



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3,302,844

CARTON

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6 Claims. (Cl. 229—10)

This invention relates to an improved carton of the type having an inner container or containers slideably received in drawer-like fashion therein and to the method of constructing the same.

Cartons of the above-described type presently being used have several undesirable features which limit their application. In particular, the inner containers may be accidently spilled from the outer sleeve in the absence of provisions made to restrain the drawer portion from sliding completely out of the ends of the outer sleeve. Also, the product is usually partially hidden from view, and cannot be removed from, or replaced in, the inner container, unless it is completely withdrawn from the outer sleeve.

It is therefore the object of this invention to provide an improved carton having an inner container and an outer sleeve which are formed in a fashion such that the inner container, once inserted within the outer sleeve, is retained therein without the need of additional retaining means.

It is a further object of this invention to provide an improved carton of the above-described type having means which prevents the inner container from being completely removed from the outer sleeve and which stops the inner container in a pre-determined position within the outer sleeve so that the product packaged therein is completely visible, and may be easily removed from, or replaced in, the inner container.

It is a still further object of this invention to provide improved cartons of the above-described type which may be stacked, one upon the other, to form a file cabinet like arrangement. In this respect, the cartons may also be enclosed within a wrapper or the like to retain the stacked cartons in a fixed relationship.

It is a still further object of this invention to provide an improved method of constructing cartons of the above-described type.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

Briefly, an exemplary carton provided by this invention comprises an outer sleeve **10** and an inner container **14** which is slideably received therein. The inner container **14** is formed with a pair of planar insert tabs **15** and **17** which engage the edges of the top and bottom walls, respectively, of the outer sleeve **10** and prevent the inner container from sliding through the outer sleeve in one direction. The inner container **14** also has a withdrawal locking tab **42** depending from its back wall **40** which is folded towards its front wall **28**. This withdrawal locking tab **42** engages a horizontally disposed stop tab **26** formed on the bottom wall **23** of the outer sleeve and prevents the inner container **14** from being completely removed in the other direction from the outer sleeve **10**. The withdrawal locking tab **42** and the stop tab **26** are positioned to contact one another when a partition wall **34** formed in the inner container **14** is adjacent the edges of the outer sleeve **10** so that a product packaged within a product retaining compartment **31** formed by the partition wall **34** is completely visible and may be easily removed from, or replaced in, the compartment.

In addition, a display support section **33** is provided in the rear of the inner container **14** which provides support for the inner container when it is withdrawn from the outer sleeve **12** so that the product may be displayed in the carton. The carton is therefore not only designed to prevent its inadvertent or accidental separation but also to be self-supporting, as a display carton for the product.

The invention accordingly comprises the several steps and the relation of one or more of such steps with respect to each of the others, and the article possessing the features, properties, and the relation of elements, which are exemplified in the following detailed disclosure, and the scope of the invention will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawings, in which:

FIGURE 1 is a side perspective view of a two-piece carton illustrative of the invention;

FIGURE 2 is a side perspective view of the outer sleeve of the two-piece carton of FIG. 1;

FIGURE 3 is a perspective view of the inner container of the two-piece carton of FIG. 1;

FIGURE 4 is a side view of the two-piece container of FIG. 1 shown in a closed position, illustrating how the planar insert stopping tabs prevent the inner containers from being further inserted in the outer sleeve;

FIGURE 5 is a view showing the outer sleeve as it is cut from a single piece of material, prior to its folding;

FIGURE 6 is a side, cut-away view of the inner container, showing the position of the engaging tab which is formed thereon to prevent the inner container from being removed from the outer sleeve;

FIGURE 7 is a view showing the inner container as it is cut from a single piece of material, prior to its folding;

FIGURE 8 is a sectional end view of the carton illustrating how the inner container is received within the outer sleeve; and

FIGURE 9 is a partial cut-away view illustrating how the withdrawal locking tab, shown in FIG. 6, engages the stop tab and prevents the inner container from being removed from the outer sleeve.

Similar reference characters refer to similar parts throughout the several views of the drawing.

In FIG. 1, a two-piece carton **10** which is illustrative of the invention is shown having an outer sleeve **12** and an inner container **14**. The carton **10** may be constructed of two pieces of any suitable sheet material, such as paperboard, plastic and the like, and may be made in various sizes and shapes by properly cutting, scoring, and gluing the sheet material, in a manner which is described more fully hereinafter.

The outer sleeve **12**, as may be seen in FIGS. 2 and 5, is cut from a single piece of material, and has a top wall **16** which is formed by folding the material at the parallel scorings **19**, two side walls **18** and **20** and a bottom wall **23** which are formed by folding the material at the parallel scorings **21**. The bottom wall **23** is formed by first folding in the inner flap **22** and gluing it to retain the outer flap **24** which is then folded in over the top of it. It may be noted that the inner flap **22** is cut-away to form a stop tab **26** in one end of it, the purpose of which will be explained more fully hereinafter. The outer sleeve **12** may also have the circular cutouts on the ends of the side walls **18** and **20** so that the inner container **14** may be more easily gripped to remove the same from the outer sleeve **12**.

The inner container **14** of the two-piece carton **10**, as may be seen in FIGS. 3 and 7, has a front wall **28**, a rear wall **40**, two side walls **30** and **32** and a bottom wall

13. The inner container 14 also has a partition wall 34 which divides the same into a large product retaining compartment 31 and a smaller compartment 33 which forms a display support section.

The inner container 14 is formed from a single piece of material by cutting and scoring the same, as shown in FIG. 7. Folding the material along the parallel scorings 39 and 41 form the front wall 40, the back wall 28 and the two side walls 30 and 32. The partition wall 34 is formed by folding the material at 90° angles along the scorings 37 and gluing the wall 36 to the side wall 30, as shown in FIG. 3. The bottom wall is formed by the flaps 44 and 48 which have the cutouts 50 and the tabs 46, respectively, which form a tongue and groove arrangement. These two flaps 44 and 48 are folded under, one upon the other, and interlocked in a well-known manner. If additional support is desired, these flaps may be glued.

It may be noted that the design of the two-piece carton provided by this invention is such that material waste is at a minimum and the scoring and gluing operations are performed with a minimum number of steps. Considerable savings in material costs and labor, which likewise represents costs in the unit price of an article, may therefore be realized. For example, the outer sleeve 12 and the inner container 14 may be cut from two rectangular-shaped pieces of material and a minimum amount of material need be cut from them to fashion the basic outlines. The scoring is all linear and is, in most cases, parallel, so that it may be easily accomplished. The gluing, which may be a troublesome operation, is likewise linear and parallel and is therefore greatly simplified in this design and may be accomplished in a single operation.

In forming these cartons, a number of pieces of rectangular-shaped pieces of material may be stamped to cut the outlines shown in FIGS. 5 and 7, and aligned in linear fashion and advanced through scoring and gluing apparatus. In one operation, all of the parallel scorings may be made, and in one additional operation, longitudinal scoring, as shown in FIG. 7, along the bottom of the inner container may be made. In the gluing apparatus, the linear, parallel glued areas, represented by the shaded areas in FIGS. 5 and 7, are applied to the respective sides of the two pieces, as required. Of course with the proper apparatus, the outlines may be individually cut and scored in a single operation and then aligned and advanced to the gluing apparatus where they may be glued, as described above.

The inner container 14 has a withdrawal locking tab 42 on its back wall 13 which depends below the bottom wall 13.

In assembling the inner container 14 within the outer sleeve 12, the depending withdrawal locking tab 42 is folded, as shown in FIG. 6, so that it projects towards the front wall 28 as the inner container 14 is slid within the outer sleeve 12. The inner container 14 is slideably received in a drawer-like fashion within the outer sleeve 12 until the planar insert tabs 15 and 17 engage the edges of the top wall 16 and the bottom wall 23. These planar insert tabs 15 and 17 prevent the inner container 14 from sliding completely through the outer sleeve 12 when being closed, and permit the inner container 14 to be removed only in one direction.

In sliding the inner container 14 out of the outer sleeve 12, the depending withdrawal locking tab 42 slides along the bottom wall 23 of the outer sleeve until it contacts the stop tab 26 formed on the flap 22 of the outer sleeve 12, as shown in FIG. 9. These two tabs prevent the inner container 14 from being pulled completely out of the outer sleeve 12, and are positioned to engage one another when the partition wall 34 is adjacent the end of the outer sleeve 12. In this position, the product which is disposed within the product retaining compartment 31 is completely visible, and can be easily removed. The partition wall 34 prevents the product from being hidden under the outer sleeve 12, and also prevents the side walls 30 and 32 from bowing or flexing to thereby form a display support section which adds stability to the inner carton 14 so that it may be withdrawn to display the product and will be self-supporting.

While the particular embodiment chosen to illustrate the invention is a two-piece carton having an outer sleeve and an inner container slideably received therein, it is apparent from the detailed description that the principles used in its construction, as well as the method of constructing the same, are equally applicable to other types of cartons. For example, these principles and method could be used to construct a carton having a pair of inner containers, each of which is constructed as described above, slideably received in the opposite ends of an outer sleeve which has a stop tab formed at each end of its bottom wall; the stop tabs engaging the withdrawal locking tabs formed on each of the inner containers to prevent them from being removed from the outer sleeve.

Also, a number of cartons, each of which may contain, for example, different size paper, carbon paper, and the like, may be stacked side-by-side in a file cabinet arrangement and easily retained in this fixed relationship by means of a wrapper or the like, which may be a stable member or merely tape, paper, cellophane or the like. Each of the inner containers may be withdrawn from its associated outer sleeve until the stop tab and the withdrawal locking tab engage, and in this position the paper or the like may be easily removed from, or replaced, therein. Also, in replacing the inner containers, they will be prevented from sliding completely through the outer sleeves by the planar tabs.

It will thus be seen that the objects set forth above, among those made apparent from the preceding description, are efficiently obtained and, since certain changes may be made in the above article without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention, which, in a matter of language, might be said to fall therebetween.

Now that the invention has been described, what I claim as new and desire to secure by Letters Patent is:

1. A two-piece carton having an outer sleeve and an inner container slideably received therein, each formed of a single piece of material, a stop tab formed in the bottom wall of the outer sleeve, a withdrawal locking tab depending from the back wall of the inner container which contacts the stop tab to prevent the inner container from being removed from the outer sleeve, and a pair of tabs projecting vertically from the front wall of the inner container which engage the edges of the top and bottom walls of the outer sleeve to prevent the inner container from sliding through the outer sleeve, and a partition wall formed in the inner container dividing the same into a pair of compartments, one of which is completely visible when the withdrawal locking tab is in contact with the stop tab.

2. A two-piece carton having an outer sleeve and an inner container slideably received therein, each formed of a single piece of material, a pair of planar insert tabs on the front wall of the inner container which engage the top wall and the bottom wall of the outer sleeve to prevent the inner container from sliding through the outer sleeve in one direction, said outer sleeve having a pair of walls which are overlapped and fixedly secured to one another to form said sleeve, the innermost one of said pair of walls having a cut-out therein which provides a horizontally disposed stopping tab, a withdrawal locking tab integrally formed with and depending from the back wall of the inner container below the bottom wall

thereof, said stop tab being folded to project towards the front wall of the inner container, the withdrawal locking tab contacting the stop tab to prevent the inner container from being removed in the other direction from the outer sleeve.

3. A two-piece carton having an outer sleeve and an inner container slideably received therein, each formed of a single piece of material, a partition wall formed in the inner container and positioned parallel to the front wall thereof dividing the inner container into a pair of compartments, a pair of semi-circular cut-outs in the side walls of one of the compartments which allow a product packaged therein to be more easily removed therefrom, a pair of planar insert tabs formed on the front wall of the inner container which engage the top and bottom walls of the outer sleeve to prevent the inner container from sliding through the outer sleeve in one direction, a horizontally disposed stopping tab formed in the bottom wall of the outer sleeve, a withdrawal locking tab formed in the back wall of the inner container which depends below the bottom wall thereof and is folded to project towards the front wall of the inner container, the withdrawal locking tab contacting the stopping tab to prevent the inner container from being removed in the other direction from the outer sleeve, the stop tab and the withdrawal locking tab being positioned to contact one another when the partition wall is adjacent the ends of the side wall of the outer sleeve so that the compartment in which a product is packaged is completely visible, preventing the product packaged therein from being hidden under the outer sleeve.

4. A two-piece carton, as claimed in claim 3, wherein said partition wall also provides a support for preventing the side walls of said inner container from bowing or flexing to thereby form a display support section which adds stability to the inner container when the same is partially withdrawn from the outer sleeve so that the carton may be used as a self-supporting display case for a product.

3. A two-piece carton having an outer sleeve and an received in a support, a stop tab formed on the bottom wall of the support, a withdrawal locking tab depending from the back wall of the drawer-like container which contacts the stop tab to prevent the drawer-like container from being removed from the support, a pair of planar insert tabs projecting vertically from the front wall of the drawer-like container which engage the edges of the top and bottom walls of the support to prevent the drawer-like container from sliding into the support beyond the tabs, and a partition wall formed in said drawer-like container dividing the same into a pair of compartments, one of which is completely visible when the withdrawal locking tab is in contact with the stop tab.

6. A carton, as claimed in claim 5, wherein the partition wall also provides a support for preventing the side walls of said drawer-like container from bowing or flexing to thereby form a display support section which adds stability to the drawer-like container when the same is partially withdrawn from the support so that the carton may be used as a self-supporting display case for a product.

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