Jan. 24, 1950 W. J. WELLS 2,495,676

DISPLAY AND SHIPPING CARTON

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Fig. 1.

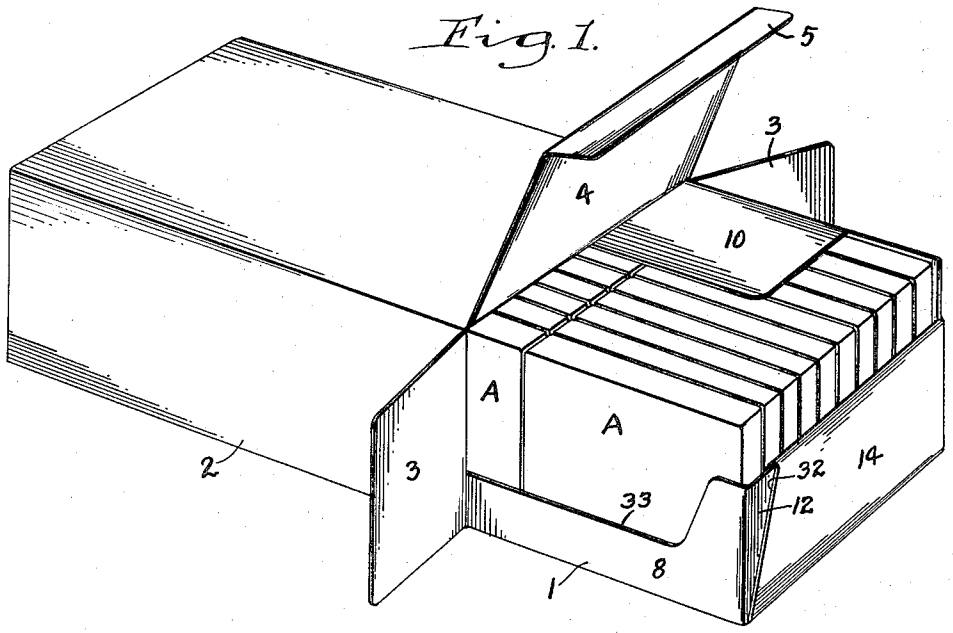
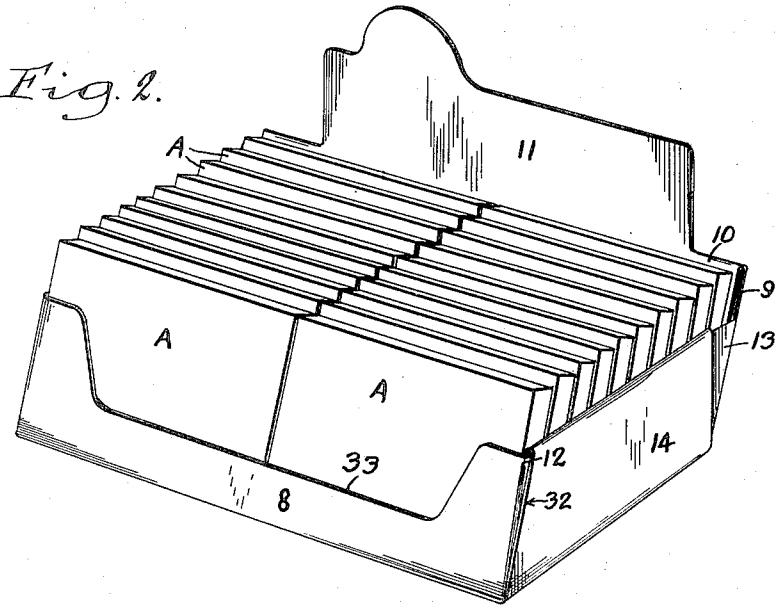


Fig. 2.



INVENTOR
William J. Wells
BY Carl W. Weeks
ATTORNEY

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Fig. 3.

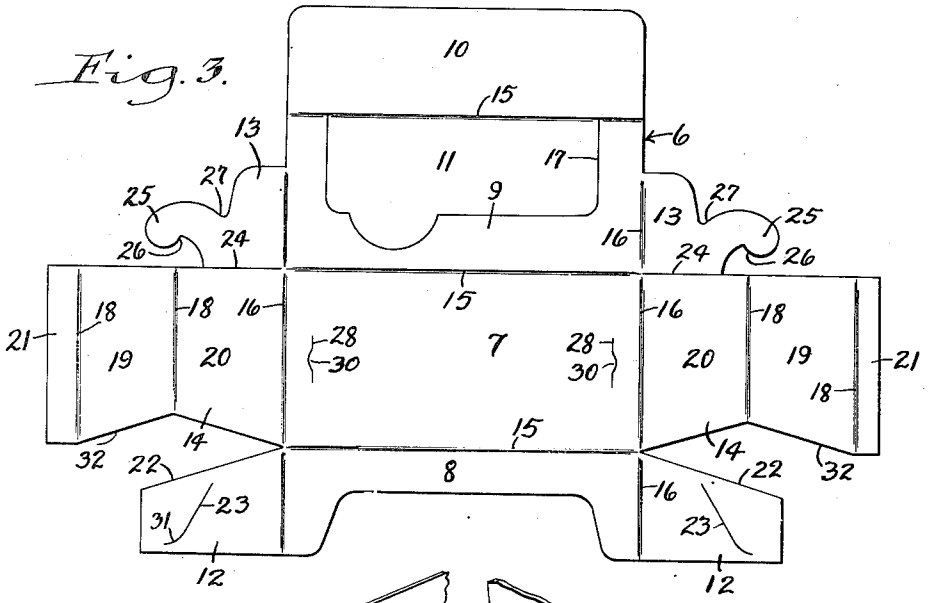
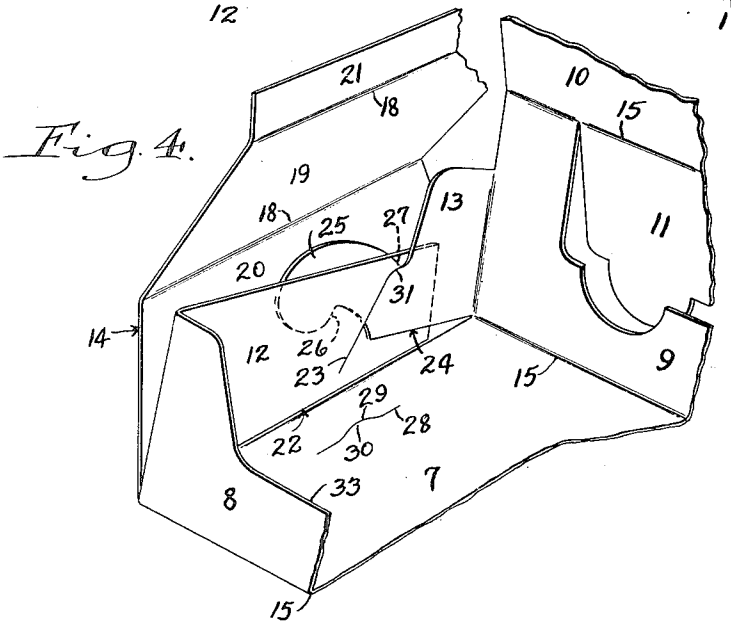


Fig. 4.



INVENTOR
William J. Wells
BY Carl W. Wiecha
ATTORNEY

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Fig. 5.

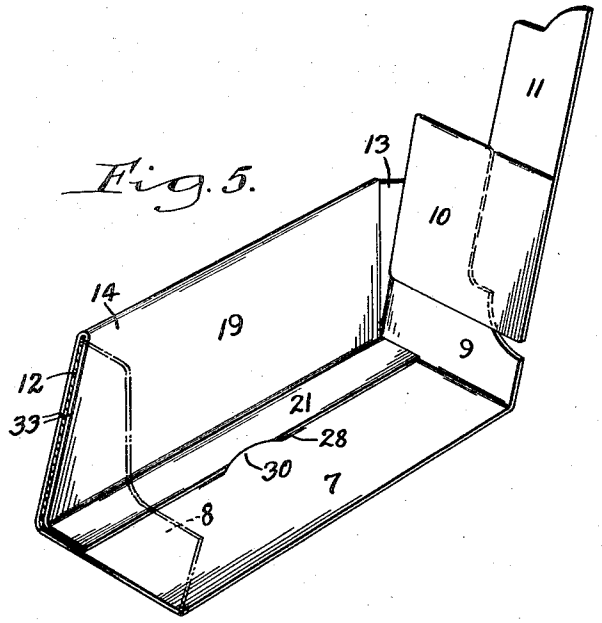
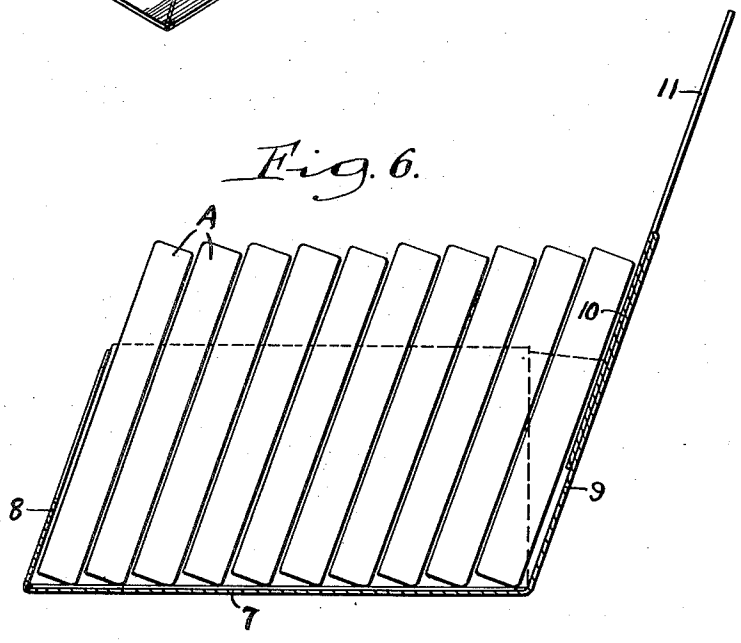


Fig. 6.



INVENTOR
William J. Wells
BY Carl W. Wiehs,
ATTORNEY

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UNITED STATES PATENT OFFICE

2,495,676

DISPLAY AND SHIPPING CARTON

William J. Wells, Buffalo, N. Y., assignor to F. N. Burt Company, Inc., Buffalo, N. Y., a corporation of Delaware

Application January 22, 1945, Serial No. 573,830

3 Claims. (Cl. 206—44)

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This invention relates to improvements in cartons, more particularly those constructed of sheet material, such as, cardboard, paperboard, plastics, and other sheet materials adapted to be folded to set up the carton in usable condition, or to be collapsed into flat condition.

It is a general object of the invention to provide a carton of the class mentioned that can readily be set up in shipping condition to contain the goods or articles in condition for shipment or storage, and also readily adjusted into display condition so as to display the goods or contents, such as boxes of cigarettes or other merchandise, so as to present an attractive display as, for example, for use in retail stores.

It is a further and more particular object of the invention to provide a carton of the class mentioned having an improved structure whereby it can be readily set up into shipping condition wherein the side walls or panels are substantially at right angles to the top and bottom, and readily adjusted into display condition wherein certain of the panels such as the front and rear panels are inclined slightly to the bottom so as to present the contents in attractive and convenient position for observation or display.

A further object of the invention is to provide in a carton of the class mentioned, an improved interlocking flap construction for the ends or sides of the carton, providing for adjustment of certain of the panels of the carton from shipping condition into display condition, and for supporting said panels in either of their said positions.

Still another object of the invention is to provide in a carton of the class mentioned, an improved interlocking tab construction having adjustable interlocking engagement with each other for supporting the carton in shipping condition or in display condition, and having an improved protective flap construction that can be readily set up into operative position for providing an enclosing supporting and protective casing for the interlocking tabs.

Another object of the invention is to provide in a carton of the class mentioned, an improved protective and supporting casing for the end tab structure that can be readily assembled into operative position and interlocked with the bottom of the carton for retaining it permanently in place.

Other objects of the invention will be in part pointed out in the following detailed disclosure of an illustrative but preferred embodiment of

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the invention, and will be in part obvious as the disclosure proceeds.

The invention accordingly comprises the features of construction, combination of elements, and arrangement of parts, which will be exemplified in the construction hereinafter set forth and the scope of the application of which will be indicated in the claims.

For a more comprehensive disclosure of the objects and advantages of the improved carton, reference is had to the following detailed description and to the accompanying drawings in which:

Fig. 1 is a perspective view of the carton set up in shipping condition and showing the outer protective casing or sleeve partially removed from the inner carton part;

Fig. 2 is a perspective view of the inner carton part set up in display condition and showing the contents, each as boxes of cigarettes, etc., supported in display condition;

Fig. 3 is a plan view of the blank of sheet material formed so that it can be set up into condition to form the display part of the carton;

Fig. 4 is a fragmentary enlarged perspective view showing the end structure of the inner or display part of the carton partially assembled, or in process of formation, and showing the interlocking flaps and the flap forming the protective casing therefor;

Fig. 5 is a view similar to Fig. 4 but showing the end structure fully assembled with the protective end flap interlocked with the carton bottom; and

Fig. 6 is an enlarged transverse vertical sectional view of the carton set up in display condition as in Fig. 2.

Referring to the drawing for a detailed description of the illustrative embodiment of the invention there shown, the improvements are embodied in a carton for containing the multiplicity of paper boxes A adapted to contain cigarettes or other material. It will be understood, however, that the improved carton may be used to contain other materials. The carton as shown embodies an inner or display part 1 adapted for receiving the boxes A and an outer casing or sleeve 2 into which the inner part 1 is adapted to telescope in closely fitting relation. Both the inner and outer parts of the carton are preferably constructed of cardboard, paperboard, fiberboard, plastic material, or other similar sheet material but the inner or display part 1 is preferably made of a finer grade of material than the outer casing 2 so as to be capable of being decorated to present an attractive appearance. The outer

casing 2 is preferably made of a heavier and coarser grade of stout cardboard and is intended to protect and support the inner display part with its contents during handling, shipping, etc. The outer protective casing is preferably of box-like construction in which the side, bottom and end adjoining walls are substantially at right angles to each other for receiving the inner part 1 when the latter is adjusted into its shipping position with the side and end walls thereof substantially upright or at right angles with the bottom thereof.

The outer protective casing 2 may be of any preferred known structure and it preferably has end closing devices such as embodied in the side flaps 3 integral with the side walls or panels of the casing and adapted to swing into closing position across the ends of the casing. An additional closure flap 4 is integrally connected with the top wall of the casing and is adapted to swing into closing position over the closed flaps 3 and is provided with a tuck-in flap or flange 5 adapted to be tucked in between the bottom of the display part 1 and the lower or bottom wall of the casing 2 and to be held in closed position by frictional engagement in well known manner. This type of end closure may be used for both ends of the outer casing 2.

As shown in Fig. 3 the inner or display part of the carton is preferably constructed from a single integral blank 6 having the requisite shape and size so as to be folded along certain lines to form the complete display part. The blank 6 may be die-cut or otherwise formed to provide a bottom panel 7, side panels 8 and 9, a top panel or flap 10, a display or stick-up tab 11, end closure flaps 12 and 13, and protective end flaps 14 adapted to be folded in enclosing relation over the end flaps 12 and 13 as later fully described. The material of the blank is preferably scored, creased or otherwise weakened along longitudinal lines 15 and transverse lines 16 so as to define the various flaps and panels of the blank and to render the blank easily bendable or foldable along these weakened lines into folded or set-up condition to form the complete display part of the carton. The stick-up or display tab 11 is defined along one edge by the adjacent creased line 15 along which it is attached so as to be bent or folded into different positions on the adjacent top flap 10. The other sides of this display tab are formed by the cut or incision 17 preferably extending entirely through the sheet material. The flaps 14 are additionally provided with scored or creased weakened fold lines 18 providing inner and outer sections 19 and 20 for each flap 14, and a terminal flange 21 which, as later described, functions to support the protective end flap 14 in operative position.

For the purpose of supporting the front and rear side panels 8 and 9 in either erect positions when the carton is set up for shipping purposes, or in inclined display position when the carton is set up for display purposes, the end closure flaps 12 and 13 at each end of the carton are specially constructed and arranged. In the illustrative embodiment the end flaps 12 on the front panel 8 are cut so as to have inclined inner or lower edges 22, and each flap is also provided with a cut or incision 23 extending entirely through the sheet material and providing an elongated slot or opening for receiving parts of the opposite end closure flap 13.

Each end closure flap 13 has an inner or lower straight edge portion 24 substantially longitudinally aligned with the adjacent creased line 15, and formed by a cut or incision extending entirely through the blank. The flaps 13 also have supporting lugs or tongues 25 preferably as shown forming integral parts thereof and adapted to enter in supporting relation into the respective incisions 23 of the flaps 12. The inner and outer edges of the lugs 25 as shown are preferably curved so as to cooperate with the cuts 23 of the end closure flaps 12 to permit limited swinging movement of the latter when the front panel 8 is tilted from shipping position to display position or vice versa. Each supporting lug 25 is formed at its inner or lower side with an abrupt shoulder 26, and on its outer or upper side with an abrupt shoulder or lug 27. These abrupt shoulders 26 and 27 function as limiting stops to limit the swinging or tilting movements of the front and rear panels 8 and 9 as more fully described below.

Formed in the bottom panel 7 adjacent to each of the opposite ends thereof, is a slit or incision 28 preferably extending entirely through the sheet material and being outwardly offset intermediate its ends as at 29 to provide an outwardly projecting lug or supporting member 30. The incisions 28 are spaced from the adjacent inner end surfaces of the carton for a distance substantially equal to or slightly less than the width of the terminal attaching flanges 21 of the protective end flaps 14, and the attaching lugs 30 are spaced slightly less than this distance so that the attaching flanges 21, due to the resilient or yielding nature of the material, can be forced or snapped into attaching position in which the outer edge portion of the flanges are interlocked in securing relation with the attaching and supporting lugs. This provides a very convenient and inexpensive attaching device whereby the protective end flaps 14 can be attached in operative position with a minimum of time and effort, while the use of adhesives or special attaching devices is entirely avoided.

From the foregoing detailed description of the construction of the blank 6, it will now be readily understood how this blank can be quickly and easily set up into operative position, and when so set up it will be readily seen how the inner or display part of the container can be readily adjusted from its upright condition assumed when inserted into the outer protective casing 2 for shipment, into its inclined display condition when removed from the casing. When the blank is formed as above described, the front panel 8 and the rear panel 9 are folded or bent upwardly upon the respective creased or weakened lines 15 as clearly seen in Fig. 4, the end enclosing flaps 12 and 13 at the opposite ends of the carton are folded or bent inwardly along the respective creased lines 16, and the supporting lugs 25 of the flaps 13 are inserted through the incisions 23 of the end flaps 12. Then the protective end flaps 14 are bent upwardly and inwardly along the respective creased or weakened lines 16 and 18 and the attaching flanges 21 are bent outwardly along the outer creased lines 18. The inner section 19 of the protective end flap is then pressed downwardly and outwardly against the adjacent inner surfaces of the end flaps 12 and 13, and a downward and outward pressure against the flanges 21 causes the outer edges thereof to be snapped or engaged with a resilient action beneath the supporting and retaining lugs 30 thus holding the parts firmly in assembled condition. The resiliency of the sheet material holds the

flanges 21 in permanent attached position beneath the lugs 30. The final assembled condition of this end structure is clearly indicated in Fig. 5 of the drawing.

When the inner part 1 of the carton is to be set up in shipping condition, the front and rear panels 8 and 9 are caused to assume substantially upright position in which they are approximately at right angles with the bottom section 7. In this position the end closure flaps 12 connected to the front panel 8 are swung upwardly slightly from their position shown in Fig. 4, and the lower inclined supporting edges 22 are spaced upwardly slightly from the adacent surface of the bottom panel 7. These inclined edges 22 permit the flaps 12 to be swung downwardly during corresponding inward tilting of the front panel 8, and they may also serve to limit inward tilting of the front panel. When the rear panel 9 is in upright position the two opposite end flaps 13 connected thereto are in contacting relation at their lower edges 24 with the bottom panel 7, and the rear panel 9 is thus supported against inward movement from its upright position. At the same time the front panel 8 is supported against outward movement beyond its upright position by engagement of the abrupt shoulder 26 at the underside of the supporting lug 25 with the lower end of the slit 23. The inner carton part is further supported in its normal shipping condition by insertion in telescoping relation within the outer casing 2 which fits closely over the inner part with its contents. In this position the top panel or flap 10 partially overlaps the upper edges of the boxes A as seen in Fig. 1, while the display or stick-up flap 11 normally assumes its original position within the plane of the rear panel 9.

When it is desired to set up the inner carton part for display purposes, it is removed from the outer casing 2 and the front and rear panels 8 and 9 are tilted to inclined position with reference to the bottom panel 7, as best seen in Figs. 2, 4 and 6. In this display position the front panel 8 is supported against undue inward movement by engagement thereof against the inclined adjacent edges 32 of the protective end flaps 14, these edges being cut to an inclination to support the front panel at the desired inclination as seen in Figs. 2 and 5. Also the front panel 8 may be additionally supported in its display position by engagement of the lower inclined supporting edges 22 of the end flaps 12 with the bottom 7. At the same time, when the rear panel 9 is tilted rearwardly, the end closure flaps 13 swing upwardly passing longitudinally through the respective elongated slots or incisions 23 until the upper edges of the lugs 25 at the abrupt shoulders 27 thereof engage with the upper terminal of the incisions 23. For providing for smooth unobstructed movement of the lugs 25 through the slots or incisions 23, the upper end portions of the latter are preferably curved slightly as seen at 31 in Figs. 3 and 4. This engagement of the shoulders 27 with the end of the slots 23 provides a limiting stop for limiting the outward swinging movement of the rear panel 9. During all these adjusting movements of the end flaps 12 and 13, it will be seen that the enclosing folded flap 14 functions to guide and support the flaps 12 and 13 and to assist in retaining them in their correct operative interlocked relation with each other. In effect these folded flaps 14 form operative protective housings or envelopes, reinforcing the adjustable interlocking end flap

structures. This enveloping housing structure closely engages the inner and outer surfaces of the movable end flaps 12 and 13 to guide and support said flaps in their operative movements.

At the time of tilting the front and rear panels as described, the boxes A will be correspondingly tilted slightly as seen in Figs. 2 and 6, thus placing them in good position for display or observation. The front panel 8 may be partially cut away as indicated at 33 so as to further display the fronts of the boxes A.

When the carton is set up for display purposes, as above described, the top panel or flap 10 is preferably tucked in between the rear-most boxes A and the rear panel 9, while the stick-up or display tab 11 is swung upwardly on its hinge or weakened line 15 into readily observable display position as seen in Figs. 2, 5 and 6. When the top panel 10 is thus moved or swung from its normal operative position as shown in Figs. 1 and 4 into a display position when the carton is adjusted for display purposes as shown in Figs. 2, 5, and 6, the end sections of the hinge 15 positioned outside of the display tab 11 (see Fig. 4) are flexed thus tending to move the display tab toward its display position. During the swinging movement of this panel 10, the portion of the hinge 15 positioned along the base of the display tab 11 is not flexed, the tendency being to retain it in its proper display position due to the positioning of the panel 10 behind the boxes A and against the inner face of the rear panel 9. In this manner, the display tab is easily kept in its display position and there is little tendency for it to move away from proper display position. The display tab may be manually adjusted for short distances on its hinge 15 to place it in its most effective position for display purposes. It will, of course, be understood that the display tab 11 as well as other parts of the display carton, may be attractively decorated with ornamental material, and may bear appropriate advertising or other display matter. Also, the boxes in their display position as shown in Figs. 2 and 6, are attractively presented and supported for display purposes.

Since certain changes may be made in the above construction and different embodiments of the invention could be made without departing from the scope thereof, 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.

The invention having thus been fully described, the following is claimed:

1. In a carton, in combination, enclosing walls including front and rear panels and a bottom, said front and rear panels being connected to said bottom for tilting adjusting movements thereon from substantially erect shipping position into inclined display position, closure flaps respectively connected to said front and rear panels and angularly disposed thereto and extending toward each other into overlapping relation, both of said overlapping closure flaps being swingable with the tilting adjustments of the panels, one of said closure flaps having a transversely extending elongated slot extending therethrough and part way thereacross and having an upper terminal, another of said closure flaps having a supporting lug or tongue projecting through said elongated slot so that said tongue and slot are relatively adjustable longitudinally of the slot during swinging adjustments of

either of said closure flaps with the corresponding tilting adjustments of said front and rear panels, a limiting shoulder connected to said closure flap having said tongue, said limiting shoulder being positioned for engagement with said upper slot terminal to limit and support the connected panel in one of its adjusted positions, a top flap for the carton forming an upper integral extension of said rear panel, a weakened line in said rear panel extending along the upper edge thereof and forming a hinge on which the top flap is swingable, said rear panel being slitted below said weakened line to form a display flap normally disposed below and connected to said hinge beneath the same to form a part of said rear panel and being swingable on said hinge into upwardly extending display position above said rear panel when the carton is adjusted into display condition.

2. In a carton, in combination, enclosing walls including front and rear panels and a bottom, said front and rear panels being connected to said bottom for tilting adjusting movements thereon from substantially erect shipping position into inclined display position, closure flaps respectively connected to said front and rear panels and angularly disposed thereto and extending toward each other into overlapping relation, both of said overlapping closure flaps being swingable with the tilting adjustments of the panels, interlocking connections between said swinging closure flaps for controlling and limiting the tilting adjusting movements of said front and rear panels, a top flap for the carton forming an upper integral extension of said rear panel, a weakened line in said rear panel extending along the upper edge thereof and forming a hinge on which the top flap is swingable, said rear panel being slitted below said weakened line to form a display flap normally disposed below and connected to said hinge to form a part of said rear panel, said display flap being swingable on said hinge into upwardly extending display position above said rear panel when the carton is adjusted into display condition, said top flap being swingable to lie against the inside of said rear panel when said display flap is in its display position.

3. In a carton, in combination, enclosing walls including front and rear panels and a bottom, said front and rear panels being connected to said bottom for tilting adjusting movements thereon from substantially erect shipping position into inclined display position, connections between said front and rear panels for controlling the adjusting movements thereof and for holding them in adjusted positions, a top flap or panel for the carton forming an upper integral extension of said rear panel, a weakened line extending along the upper edge of said rear panel between the latter and said top panel and forming a hinge on which the top panel is swingable, said rear panel having a slit positioned below and terminating substantially at said weakened line to form a display flap normally positioned below and connected to said hinge to form a part of said rear panel, said display flap being swingable on said hinge at the upper edge of said rear panel into upwardly extending display position above the rear panel, and said top panel being swingable on said hinge into downwardly extending position against the inside of the said rear panel so as to support said display flap in its display position.

WILLIAM J. WELLS.

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