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M. GOLDSHOLL

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PAPERBOARD CARTON WITH COVER

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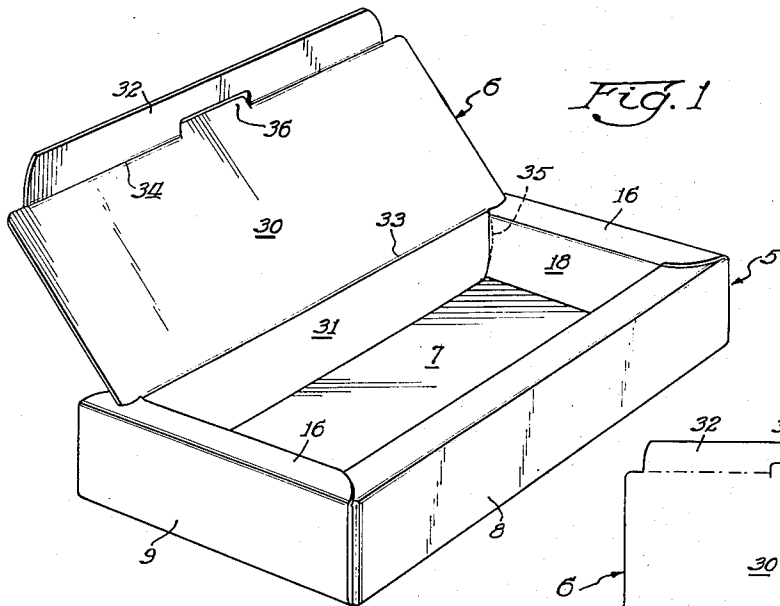


Fig. 1

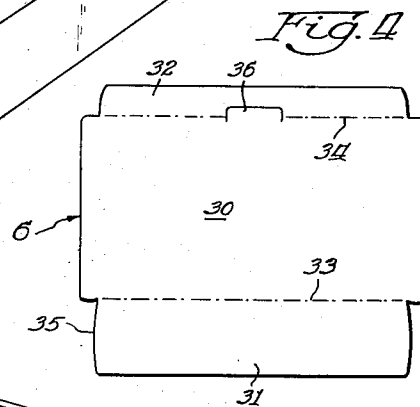


Fig. 2

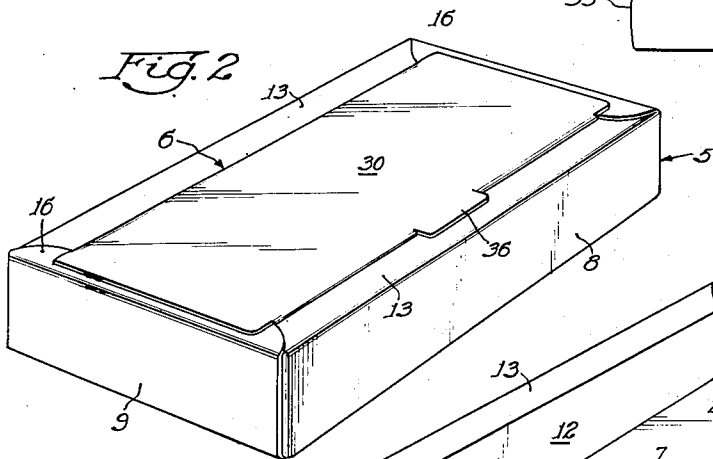


Fig. 3

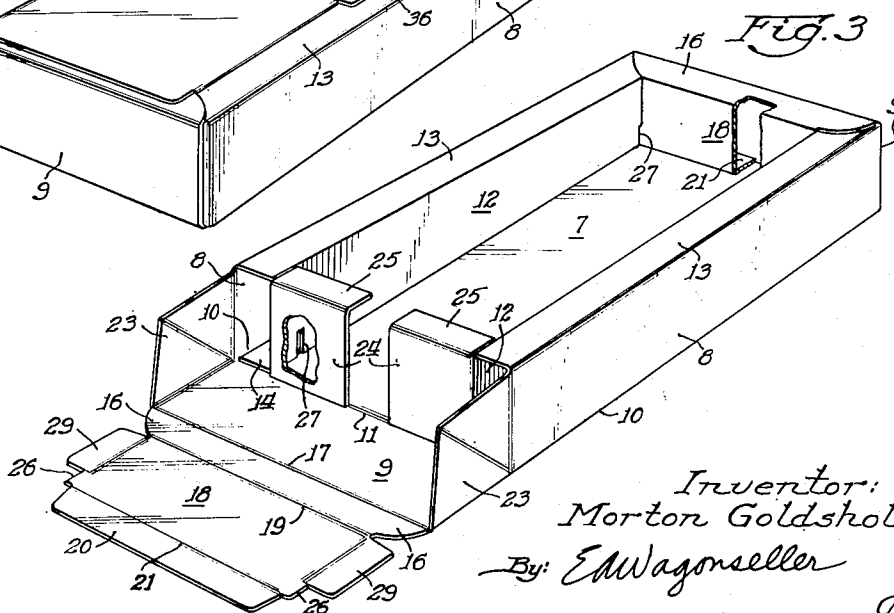


Fig. 4

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Att.

UNITED STATES PATENT OFFICE

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PAPERBOARD CARTON WITH COVER

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3 Claims. (Cl. 229-44)

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The present invention relates to paperboard cartons and more particularly to the combination of a carton and a cooperating cover portion.

One object of the invention is to provide a simple, economical and convenient carton of tray form with a cover member therefor having convenient means for retaining the cover in proper closed position.

A further object of the invention is to provide a carton of tray form with a hinged cover separate from the tray, adapted to be assembled quickly and securely thereon, the cover being formed to cooperate with the upper edges of the tray walls in such manner as to be supported effectively in closed position.

Other objects of the invention will become apparent in the following specification and in the claims appended thereto.

In the drawings:

Fig. 1 is a perspective view of the carton with the cover in an opened position;

Fig. 2 is a perspective view similar to Fig. 1 with the cover in a closed position;

Fig. 3 is a perspective view of the carton in a partially erected condition; and

Fig. 4 is a plan view of the cover blank.

In general, the present invention is embodied in a paperboard carton of the type in which the walls are of hollow, double panel structure in combination with a separate cover panel that is adapted to extend over the top of the tray and comprises parts that cooperate with the inner panel wall surfaces to maintain one portion of the cover in position with respect to the tray, the cover having a hinge line enabling the main cover panel to be raised for access to the contents as well as to provide a display panel.

The present invention, in its preferred form as disclosed herein, comprises a tray portion indicated generally at 5 and a cover portion indicated generally at 6. The tray 5 is preferably formed from a single blank to provide an elongated bottom panel 7, side wall panels 8, 8 hinged secured to the longer edges of the bottom panel and end wall panels 9, 9 hinged secured to the shorter edges of the bottom. The lines of fold or hinge lines for the side wall panels 8 are indicated at 10, 10 and one of the lines of fold or hinge lines for the end wall panels 9 is indicated at 11.

The side wall panels 8, 8 each preferably have an inner panel 12 connected thereto. In the present instance the inner panels 12 are illustrated as spaced from the outer panels 8 by the provision of a narrow panel portion 13 which forms the upper surface or rim of each side wall.

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Each inner panel 12 of the side walls is provided at its outer edge with an attaching strip, one of which is indicated at 14, which is secured as by means of adhesive to the bottom panel 7. By this arrangement of the parts of the side walls 8, 8, they may be moved from collapsed to upright, expanded position, permitting the carton to be shipped and stored in collapsed form until ready for use.

As each end of the carton is preferably formed in an identical manner only one end has been illustrated in detail—see Fig. 3. The panel 9 has at its outer edge a rim panel portion 16 hinged to the panel 9 along fold line 17. On the other edge of the rim panel 16 is an infolding end wall flap 18 hinged to the rim panel 16 along fold line 19. An additional flap 20 is provided on the outer edge of the flap 18 which is separated from such flap by fold line 21.

In the present instance each outer end wall panel 9 is joined at its edges to the ends of the outer side wall panels 8 by means of diagonally foldable corner flaps 23, 23 which are adapted to be folded inward to lie between the ends of panels 8 and 12 and the inner face of the panel 9. When the wall 9 is in vertical position against the infolded corner flaps 23 the rim panel 16 will be folded to horizontal position parallel with the bottom 7, after which the end flap 18 will be folded inwardly to a position in which it extends vertically of the carton and parallel with the outer wall panel 9. The flap 20 on the edge of the flap 18 is folded so that its free edge will extend toward the adjacent end of the carton. Thus flap 20 will lie directly below and in parallelism with the rim panel 16.

For the purpose of strengthening the end construction, flaps 24, 24 are formed as extensions on the inner side wall panels 12, 12 and flaps 25, 25 are provided, one on the upper edge of each of the flaps 24. As indicated in Fig. 3, the flaps 24 are folded so as to be directed inwardly to lie in a common plane after which the short flaps 25 are bent over so as to lie substantially parallel with the bottom panel 7. When the end wall structure is assembled as above described, the panels 16 will come to rest upon the flaps 25. For the purpose of securing the infolded end wall flaps 18 in position, tabs 26, 26 are formed on the ends of each flap 18 near its outer edge which is defined by fold line 21. These tabs are adapted to move frictionally over the surface of the inner side wall panels 12 so that they will snap into locking openings 27 formed in such panels.

Foldable flaps 29 are provided on the edges of

the end wall flaps 18 disposed along the ends of the flap 18 and between the tabs 26 and the inner edge of the flap 18 as defined by the fold line 19. The flaps 29, 29 are adapted to be bent over at right angles to the flap 18 so that their free edges will be directed toward the adjacent end of the carton. These flaps will thus lie flat against the adjacent inner side wall panels 12 and each will have its upper edge, which is adjacent the fold line 19, in engagement with the under side of the adjacent flap 25.

The cover member 6 has a main panel 30, a securing panel 31 along one of the main panel side edges and a panel 32 along the opposite side edge adapted to form a tuck flap for the outer edge of the cover. The securing panel 31 is hingedly related to the main panel 30 along fold line 33 and the tuck flap is hinged to the panel 30 along fold line 34.

As indicated in Figs. 1 and 2 the length of the panel 30 is preferably such that its ends will rest upon the horizontal rim panels 15 which constitute the upper edges of the end walls. The panel 31 is adapted to be secured against or adjacent to the inner surface of a side wall of the tray and for this purpose the securing panel 31 is preferably made shorter than the main panel 30 and is symmetrically located with respect to such panel. The ends of the securing panel 31 in the present instance are somewhat outwardly curved as indicated at 35 to provide projecting portions rigid with the panel and capable of slipping past the inner edges of the panel 16, at the juncture of those edges with the inner panels 18, with something in the nature of a wedging action, the paperboard yielding to a degree because of its natural resilience. The securing panel, including its outwardly or convexly curved ends, is of such overall length as will cause those ends to extend beyond the plane of the panels 18 into the spaces between the panels 18 and 9. In this position each end of the securing panel 31 will be engaged between the face of panel 12 and the adjacent edge of a panel 18. See Fig. 1.

The securing panel 31 is preferably, although not necessarily, made of such width as to cause its outer free edge to rest upon the bottom panel 7 of the tray.

A cover retaining flap 36 is provided on the outer edge of the cover so that when the cover is closed the flap 36 will rest upon the upper surface of the wall panel 13, preferably as illustrated in Fig. 2. As the flap 36 is cut from the contour of flap 32 the crease line 34 for the flap 32 is preferably interrupted across flap 36 so that this flap will be relatively rigid. Thus, when flap 32 is tucked in, as indicated in Fig. 2 the flap 36 will support the free edge of the cover centrally of the length of the carton. The ends of the cover are supported by the fact that such ends rest upon the panels 16 constituting the upper surfaces of the end walls.

The carton parts may be packed and shipped in a flat condition and when it is desired to use the carton for retention of goods the tray portion is set up by moving the side walls to vertical position, folding in the flaps 24, 24, folding over the panels 25, 25 to a horizontal position and then bringing each of the end wall panels 9 to a vertical position with the corner portions 23 lying folded between the panels 9 and the ends of the side walls and the flaps 24, 24. With the end wall panels 9 in vertical position, the panel 16 and flap 18 are folded over so that panel 16 lies flat on flaps 25, 25, then each of the flaps 18 is folded

down to form the inner surface of the end walls and at the same time the flaps 29, 29 are tucked inward to lie flat against the inner side wall panels 12, the flap 20 is folded back to lie flat against the bottom and beneath the flaps 25, 25, and the projecting tabs 26 are moved with the flap 18 until such tabs snap into locking engagement within the aperture 27 of the inner side wall panels 12.

With the tray set up it is only necessary to insert the securing panel of the cover into the tray so that the end portions 35, 35 come into an engaged position between the end edges of the end wall flaps 18 and the surface of the inner side wall panel 12 thus securing the cover to the tray. The cover may then be folded down along fold line 33 and the flap 32 may be folded over and tucked in at the front of the tray leaving flap 36 in the plane of the cover so that it will come to rest upon the top edge of the side wall.

From the foregoing it is apparent that the present invention provides an economical and convenient cover construction for a carton of tray form which will afford reasonable protection for the contents from dust as well as from breakage of contents due to objects falling upon the carton. The cover lends itself well to carrying printed or display matter on either side. When the cover is in raised position, as illustrated in Fig. 1, any printed matter on the inside surface of the cover is shown to advantage whereby attention of the observer can be effectively directed to the contents of the carton.

The cover has substantially all of the advantages of a telescoping type cover with few of its disadvantages, for the reason that it is easy to bring the cover to closed position or to open position. It is much less costly to produce and, unlike a telescoping cover, it can be very effectively employed for display purposes without disengaging the cover from the tray. If it is desired to utilize the tray without its cover the cover can be very easily removed and laid aside and, when again needed, it may easily be secured to the tray.

While reference has been made to side walls and end walls it is to be understood that such reference is for ease and simplicity of description and that the walls referred to as the side walls may be the same length or shorter than the end walls without departing from the invention.

While the present description sets forth a preferred embodiment of the invention, certain changes may be made in the construction without departing from the spirit of the invention, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

I claim:

1. A combined paperboard tray and separable cover construction, the tray having a bottom panel, hollow side walls on the bottom panel, end walls for the tray each formed with an outer end wall panel secured to the ends of the bottom panel, a narrow top panel on each outer end wall panel foldable to extend inwardly therefrom and having portions extending outwardly beyond the inner faces of the hollow side walls, an infolded flap hinged to each of the top panels forming an inner end wall panel at each end of the tray, the vertical edges of the infolded flaps each being disposed closely adjacent to the inner faces of the hollow side walls, and means for retaining the end wall flaps in their infolded hollow-wall-

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forming positions, and the separable cover comprising a main panel and an integrally hinged securing panel, the main panel having a length whereby its end edges are adapted respectively to overlie portions of the narrow top panels of the end walls of the tray, the securing panel having a height approximately equal to that of the hollow side walls and being adapted to extend vertically into the tray along the inner face of one of the hollow side walls and having a length slightly greater than the distance between the inner faces of the inner end wall panels, said securing panel being relatively rigid and unscored between its end edges, the ends of the securing panel terminating in outwardly curved edges adapted to be wedged between the edges of the infolding end wall flaps and the adjacent side wall, and engaging under said outwardly extending portions of the top panels to restrain the securing panel against upward movement. whereby the cover member is maintained against accidental dislodgement.

2. A combined paperboard tray and separable cover construction, the tray having a bottom panel, hollow front and rear side walls on the bottom panel, end walls for the tray each formed with an outer end wall panel secured to the ends of the bottom panel, a narrow top panel on each outer end wall panel foldable to extend inwardly therefrom and having portions extending outwardly beyond the inner faces of the hollow side walls, an infolded flap hinged to each of the top panels forming an inner end wall panel at each end of the tray, the vertical edges of the infolded flaps each being disposed closely adjacent to the inner faces of the hollow side walls, and means for retaining the end wall flaps in their infolded hollow-wall-forming positions, and the separable cover comprising a main panel and an integrally hinged securing panel, the main panel having a length whereby its end edges are adapted respectively to overlie and to be in contact with portions of the narrow top panels of the end walls of the tray, said main panel also having a forward marginal edge portion adapted to overlie and to rest in contact upon the upper edge of the front side wall, the securing panel having a height approximately equal to that of the rear side walls and being adapted to extend vertically into the tray along the inner face of one of the rear side walls and having a length somewhat greater than the distance between the inner faces of the inner end wall panels, the ends of the securing panel terminating in outwardly curved portions receivable between the edges of the infolding end wall flaps and the adjacent side wall and engaging under the outwardly extending portions of the top panels to restrain the securing panel against upward movement and to hold the outwardly extended portions of the edges of the cover panel

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in snug engagement with the narrow top panels of the end walls of the tray when the cover main panel is in raised position.

3. A combined paperboard tray and removable and replaceable paperboard cover for such tray, the tray comprising a rectangular bottom panel, a pair of opposed side walls and a pair of opposed end walls integral with the bottom panel and extending upwardly therefrom, each side and each end wall being composed of an inner and an outer panel, the inner and outer panels of each end wall being connected in spaced relation along their upper edges by a rim panel and the inner panels of the end walls having portions of their ends substantially abutting against the inner surface of the respectively adjacent inner panels of the side walls at the inner corners of the tray, each of the rim panels at its end adjacent to a predetermined one of said side walls and at its juncture with the inner panel of its end wall providing a cover securing shoulder, the cover comprising a generally rectangular top panel extending from one tray side wall inner panel to the opposite one and from one tray end wall inner panel to the opposite one and having marginal edge portions along its end edges overlapping corresponding portions of said tray end wall rim panels, and a cover securing panel integral with and hinged to said top panel and juxtaposed in face to face relation with the inner surface of the inner panel of one of said tray side walls throughout the length thereof between said tray end walls, said securing panel having end marginal portions disposed between said end portions of said tray end walls and said inner surface of said inner panel of said one of said tray side walls and projecting outwardly beneath and beyond said shoulders, said securing panel including said end marginal portions being in substantially one plane and relatively rigid from end to end, the outer end edges of said marginal portions to wedge past said shoulders.

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