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 [33] **Japan**
 [31] **43/83637**

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[54] TAPE ROLLS HOLDING AND DISPLAY BOX 5 Claims, 6 Drawing Figs.

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[51] Int. Cl. **B65d 5/50,**
 B65d 5/52, A47f 1/14

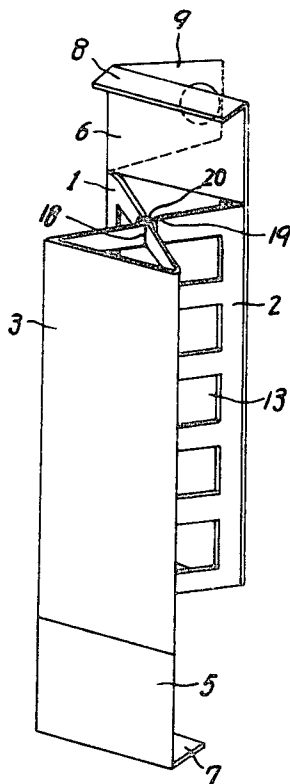
[50] Field of Search 206/45.18,
 45.14, 65 R, 72, 73; 229/14 C, 28 R; 211/40, 41

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ABSTRACT: A selectively openable and closeable display box or carton for holding a plurality of rolls of tape for display. The carton has a front panel with a plurality of window openings therein and a back panel provided with a corresponding plurality of window openings. A fold line is provided along the longitudinal center portion of each of the front and back panels across the series of window openings. Sidewalls connect the opposite ends of the front and back panels along integral corner folds of the carton. The front and back panels are adapted to fold inwardly along their respective longitudinal fold lines, whereby they are moved toward each other and releasably held with their fold lines adjacent one another so that rolls of tape can be held in the opposed window openings.



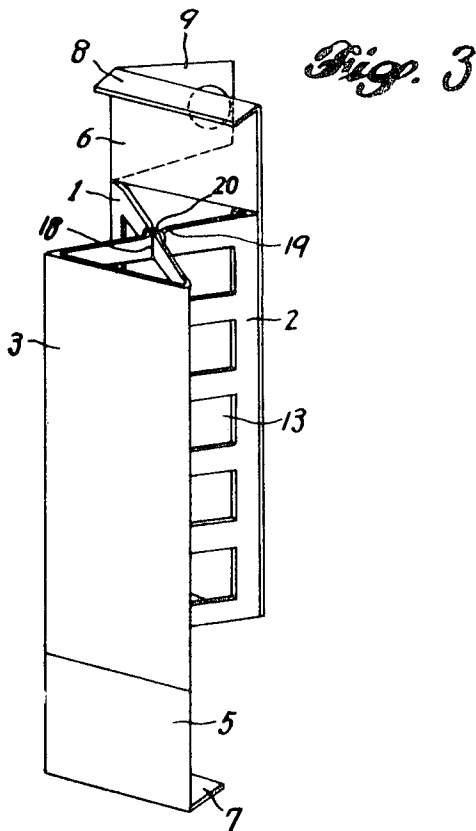
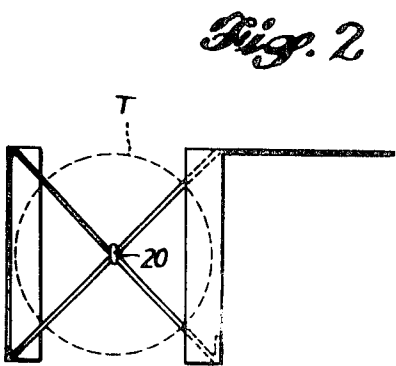
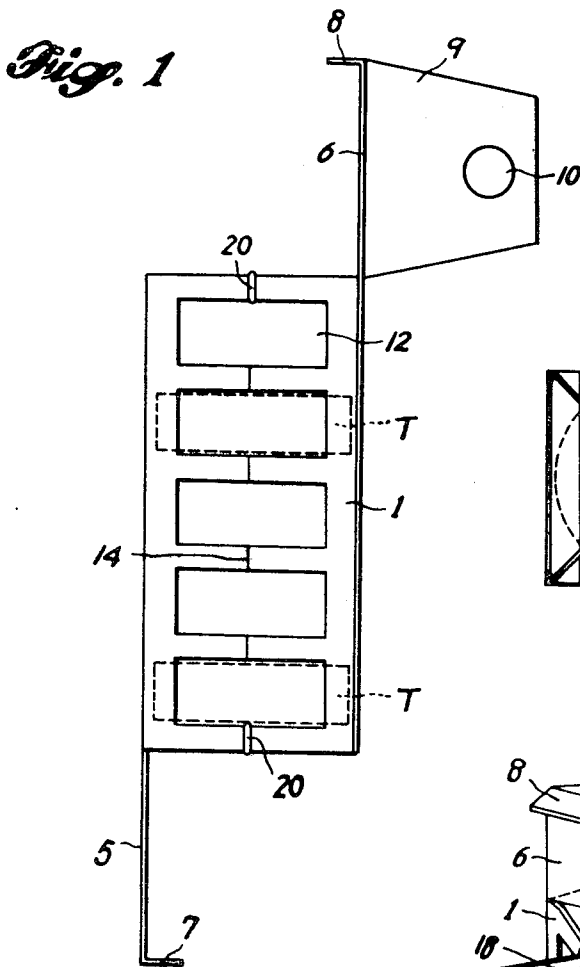


Fig. 4

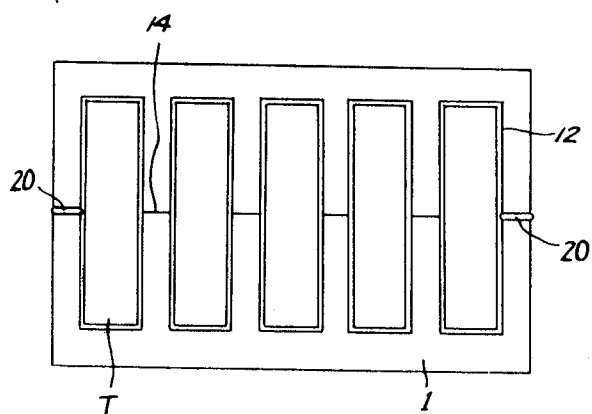


Fig. 5

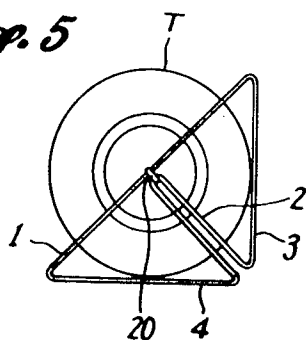
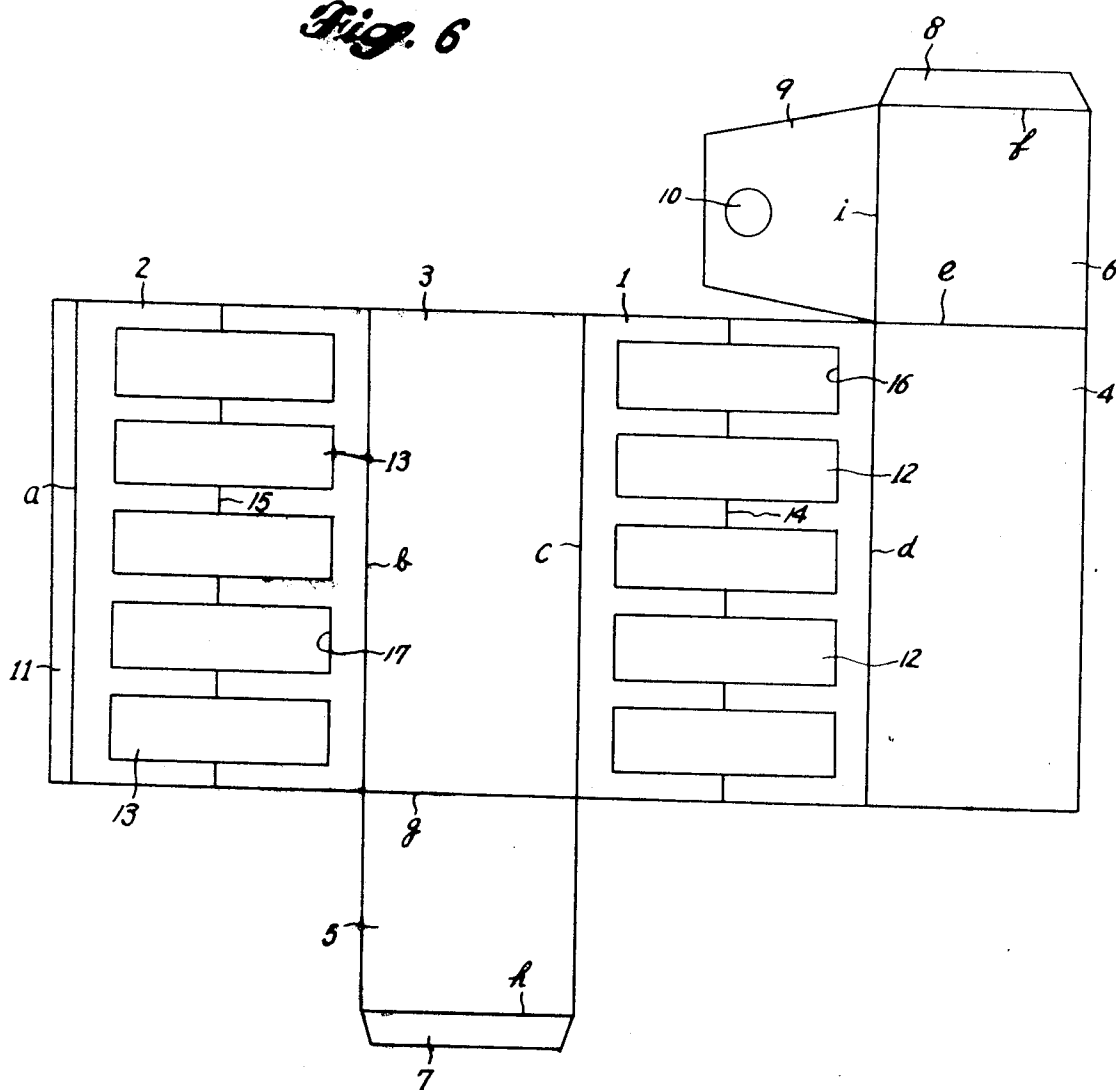


Fig. 6



TAPE ROLLS HOLDING AND DISPLAY BOX

This invention relates to a display box or carton for holding a plurality of tape rolls for display.

In the specification and claims the term "tape roll" means various tapes such as pressure-sensitive adhesive tape, moisture-active tape (sometimes referred to as gum tape), solvent-active or nonadhesive tape or the like which is wound into a roll form. Typically, such tape is wound around a tubular core into a roll.

It has been a conventional practice that, when such rolls are placed on the market for sale in retail stores, each roll is packed in a paper box or metal can. However, there are drawbacks that the packing operation is difficult or troublesome, handling is not easy, it is impossible to inspect the packed roll from outside. Further, such package is not attractive from the display point of view.

Therefore, it is an object of this invention to provide selectively and readily openable and closeable carton for holding a plurality of tape rolls in such a manner that any desired tape roll (s) can be easily taken out or inserted in the carton by a very simple operation.

Another object of this invention is to provide a carton of the type mentioned just above which can hold a plurality of tape rolls with an attractive display effect.

Still another object of this invention is to provide a carton of the type mentioned above which can hold a plurality of tape rolls in such a manner that each roll is partly exposed out of the carton so that it is visible from outside for inspection and for effective display.

Another object of this invention is to provide a carton of the type mentioned above which is simple in the structure and easy to manufacture and assemble.

Further objects, advantages and features of this invention will be apparent from the following description.

These objects of this invention are accomplished according to the invention by providing a carton which comprises a front panel provided with a plurality of window openings arranged in series, a back panel provided with a plurality of window openings respectively corresponding with the openings in the front panel, a folding line provided on each of said panels along its lengthwise center and across the series of the window openings, a first sidewall connecting the front panel and back panel at one side, a second sidewall connecting the front panel and back panel at the other side, each of the front panel and back panel being adapted to be folded inwardly along the folding line so that when the front panel and back panel are so folded inwardly and toward each other the tape roll can be held in the adjacent window openings on the front and back panels.

Each opening is rectangular and has a length slightly longer than the tape roll diameter and has a width slightly larger than the width of the tape so that the tape roll can barely pass through the opening before the panel is folded. However, when the front (or back) panel is folded inwardly as mentioned above the tape roll can not pass through the window opening. As will be understood, the front panel, back panel, first sidewall and back sidewall together form an open-ended carton. When the carton is used for display or otherwise in an upright manner, it will be deemed to have an upper and lower end. Preferably, one of the sidewalls is provided at its lower end with an end flap to close the bottom opening of the carton after the both panels have been folded. Similarly, one of the sidewalls may be provided at its upper end with another end flap to close the upper opening of the carton after the both panels have been folded.

The invention will be explained in more detail by referring to the accompanying drawings wherein:

FIG. 1 is a front view of a carton embodying the present invention before closing both open ends;

FIG. 2 is a plan view of FIG. 1;

FIG. 3 is a perspective view of the carton;

FIG. 4 is a view showing the state in which the rear panel is fully folded together to lie one half over the other half and the front panel is not folded for another form of display position in which form the end panels are preferably omitted or removed;

FIG. 5 is a side view of the form of FIG. 4; and

FIG. 6 is a plan view of one developed cutout of the carton blank prior to being assembled into a carton of the invention.

The material for forming a carton of this invention may be paper (sheet or board) or any other suitable material such as synthetic resin sheet, for example, polypropylene, polyvinylchloride, etc. provided it is self supporting. Preferably, a single and integral sheet in a shape adapted to be assembled into a carton is stamped out from a single-sheet material. In the embodiment shown in the drawings, a sheet as shown in FIG. 6 is stamped out. Indicated with 1 is a front panel, 2 is a back panel, 3 is a first sidewall and 4 is a second sidewall. One of the sidewalls has a lower end flap at lower end, and one of the sidewalls has an upper end flap at the upper end. In the embodiment shown, the first sidewall 3 has a lower end flap 5 and the second sidewall 4 has an upper end flap 6. The end flaps 5 and 6 are provided respectively with insertion lips 7 and 8 in the usual manner. Preferably, the upper end flap 6 is formed at one side with a suspender tab 9 having a hole 10. Along the longitudinal marginal of the back panel 2 there is provided a narrow side flap 11.

The front panel 1 is formed with a plurality of window openings 12 (there are five openings in the embodiment shown). Corresponding openings 13 are also formed in the back panel 2 as shown. Each opening is rectangular and has a length and width slightly larger respectively than the diameter and width of a tape roll to be held by the carton. Along the longitudinal centerline and across the series of the openings there is formed a folding line 14 on the front panel 1. A similar folding line 15 is also formed on the back panel 2. As shown the window openings on each panel are arranged in parallel and with a suitable space between adjacent openings. The openings 12 on the front panel 1 and the openings 13 on the back panel 2 are in symmetrical relationship with each other.

Indicated with the letters *a, b, c, d, e, f, g, h* and *i* are folding lines.

In assembling the above-mentioned sheet material into a carton of the invention, the various portions are folded inwardly along the folding lines *a, b, c, d, e, f, g, h* and *i*, and then the surface of the side flap 11 is bonded to the back surface of the second sidewall 4 along the longitudinal marginal by means of a paste, adhesive or the like (FIG. 3). The carton thus assembled is now ready for use.

In packing tape rolls in the carton, each tape roll *T* is inserted into the carton through the window opening. Then, the front panel 1 and back panel 2 are folded inwardly along the respective folding lines so that the tape *T* engages the edges 16 and 17 of the openings 12, 13 and cannot slip out from the openings. Then, the upper end flap 6 covers the upper open end of the carton and the lip 8 is inserted inside the upper end portion of the first sidewall 3. Similarly, the lower open end of the carton is covered by the lower end flap 5 and the lip 7 is inserted inside the lower end portion of the second sidewall 4. In this way the carton assembly is fixed with the tape rolls removably held therein. It will be understood that each end flap 5, 6 is of such a dimension that it will fit the open end of the carton in the state where the both longitudinal middle portions of panels 1 and 2 have been folded inwardly.

As will be understood, the first sidewall 3 and the second sidewall 4 are identical in dimension, and the front panel 1 and back panel 2 are identical in dimension. Preferably, the relationship of these walls and panels in respect of their widths is such that when the panels 1 and 2 are folded inwardly the folding edge 18 of the front panel 1 and the folding edge 19 of the back panel 2 will abut or contact with each other (FIG. 2 and FIG. 3). In order to render the carton assembly more rigid it is preferable to releasably connect the edges 18 and 19 at the lower end and/or upper end by a suitable fastener 20 as shown in FIGS. 1, 2 and 3. However, the end flaps 5 and 6 also serve exceptionally well to releasably maintain the inwardly folded edges 18 and 19 in good adjacent relationship. The suspender 9 can be used to hang the carton with the tapes held therein for display. In this case the hole 10 is utilized to hook the suspender 10 on a nail or the like. Since the tapes are partly

exposed out of the window openings 12, 13 they are visible from outside.

When it is desired to take out any tape roll, both end flaps 5, 6 are pulled out and one or both panels 1 and 2 is pulled back (unfolded) to the original plane form to disengage the edges 16 and/or 17 from the tape. The tape is now free to be slipped out from the window openings. If desired, the taken-out tape roll may be replaced with a new one in this state of carton. Then the unfolded panel (s) is again folded inwardly to retain the tape roll and thereafter the end flaps are again returned to the ordinary closure position.

If desired, as shown in FIGS. 4 and 5, it would be possible to fully fold the back panel 2 so that its one half would lie on the other half, while the front panel 1 is not folded. Preferably, the folded edge of the back panel 2 is fixed to the front panel 1 along the latter's folding lines by means of a releasable fastener 20. The carton in this state may be placed horizontally for display as shown with the second sidewall 4 forming the bottom and the first sidewall 3 forming the back support. In this state, the tape roll can be freely taken out or inserted in the window opening 12 without disassembly or opening and closing of end flaps. Further, in this case, the end flaps 5 and 6 are not necessary and therefore may be removed if desired.

What I claim is:

1. A selectively openable and closeable merchandising and display carton comprising a plurality of interconnected front, side, back and closeable end panels, which carton is used to hold and display a plurality of predetermined sized tape rolls, wherein the front and the opposed back panels are each provided with correspondingly disposed and sized spaced-apart rectangular window openings respectively only slightly larger than the cross-sectional diameter and width of a given size tape roll to be carried therein to enable the rolls to barely pass therethrough during initial packaging thereof; each of said front and back panels having a folding line formed along its longitudinal center across the series of window openings; each of the front and back panels being adapted to be folded in-

wardly along their respective longitudinal center fold lines toward each other; the sidewalls are constituted by first and second opposed sidewall panels interconnecting the front and back panels in generally parallel relation; each of the sidewall panels being integrally connected via fold lines with said end panels or flaps which are of predetermined size related to and for determining the amount of inward folding of said front and back panels when assembled such that upon said inward folding of said front and back panels, the seven lengths of the window openings are effectively reduced with the attendant nearing of said opposed sidewall panels, and the closed end flaps thereby releasably close opposite ends of the carton and the tape rolls are captively held in said window openings of effectively reduced dimension.

2. A carton as defined in claim 1 wherein the respective inwardly folded front and back panels engagingly abut or contact one another along the center longitudinal fold line thereof.

3. A carton as defined in claim 2 further including releasable fastener means to adjoin the opposite ends of said front and back panels to releasably retain them in said contact form.

4. A carton as defined in claim 1 wherein said carton is adapted to display circular rolls of tape, and the carton opposite end flaps each have a squared portion whose linear dimensions are substantially equal and correspond generally to the diameter of the tape rolls to be displayed, and said end flaps each further include an integrally formed terminal insertion lip connected via a fold line and said lips serving to releasably retain the end flaps in the carton end closing relationship when folded within the carton.

5. A carton as defined in claim 1 wherein one of said carton end flaps is provided with one integrally formed suspender flap portion adapted to be folded transversely to the flap when in use and apertured to facilitate suspending the carton upon a hook for display with the cartons longitudinal dimension in a generally vertical disposition.

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