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DISPLAY BOX

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Fig. 1.

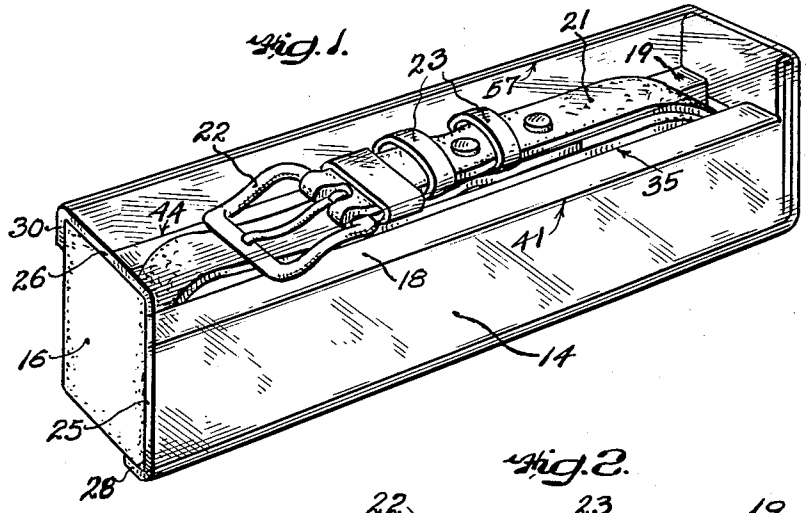


Fig. 2.

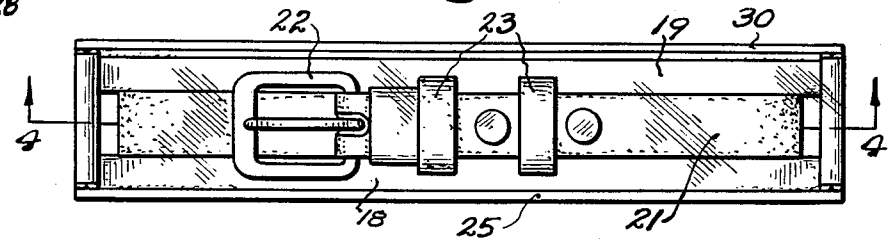


Fig. 3.

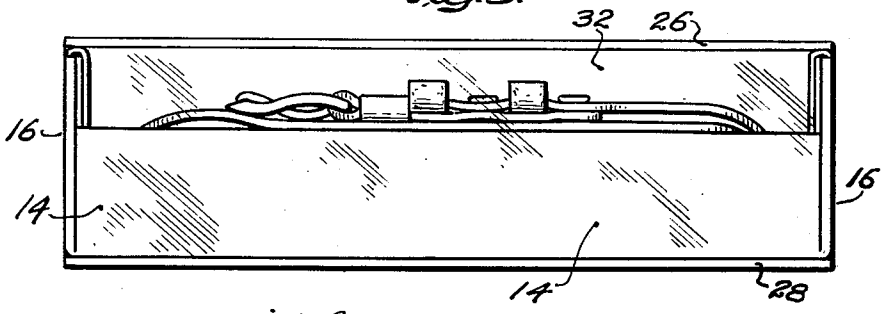
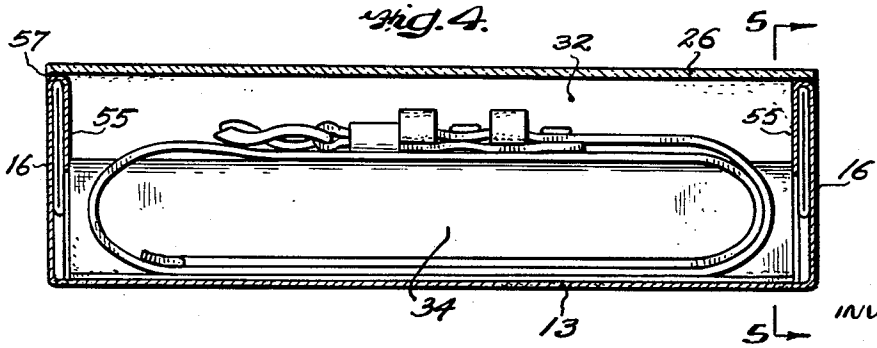


Fig. 4.



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Fig. 5.

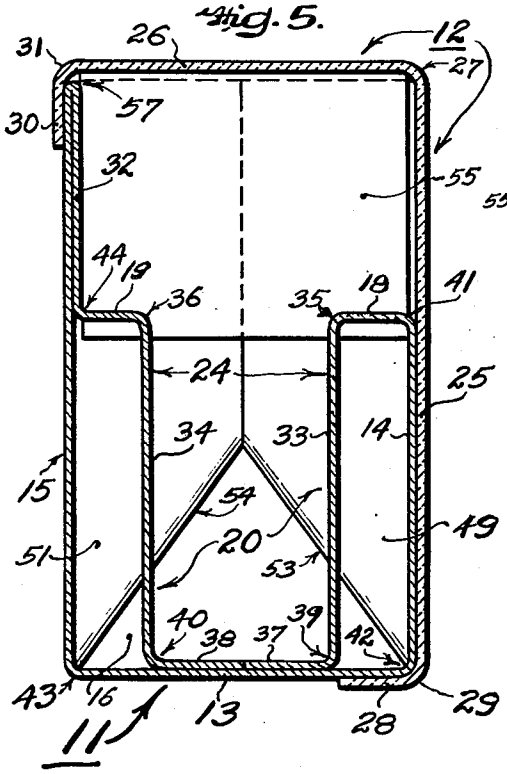


Fig. 7.

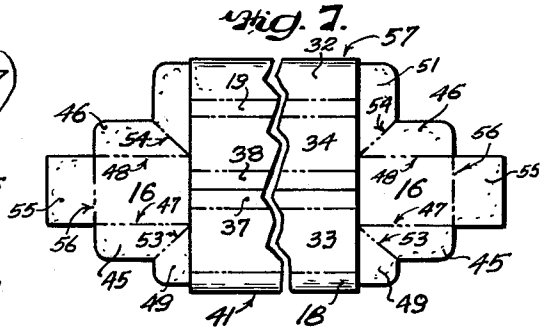


Fig. 8.

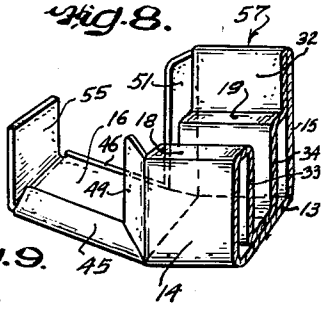


Fig. 9.

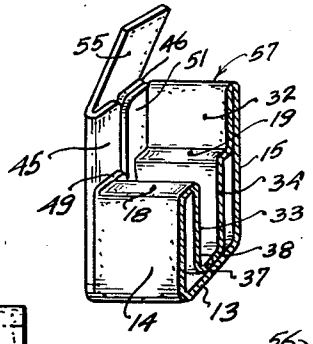


Fig. 6.

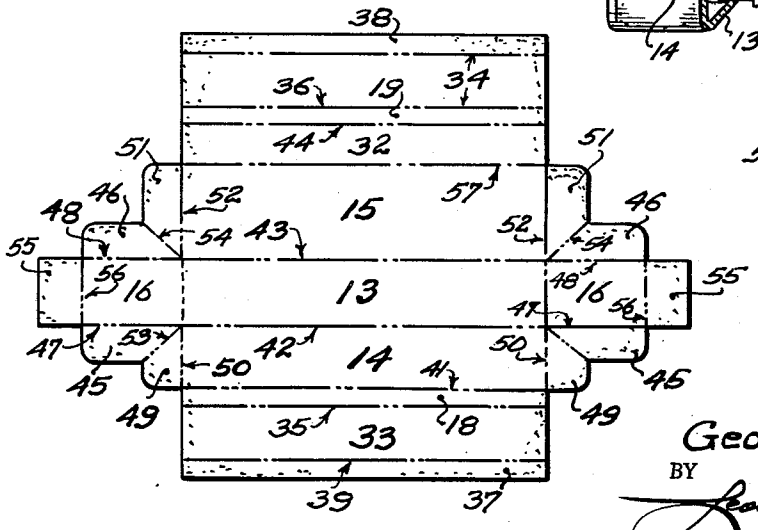
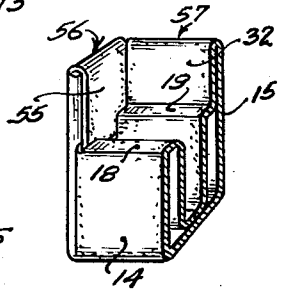


Fig. 10.



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Fig. 11.

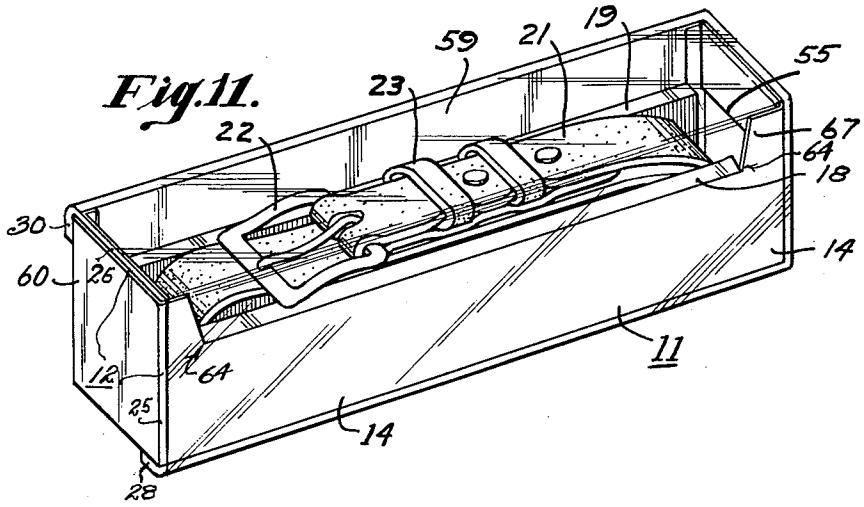


Fig. 12.

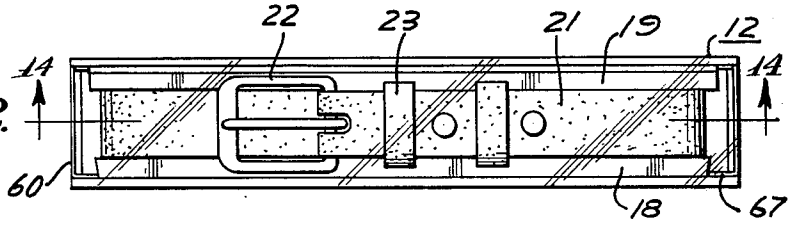
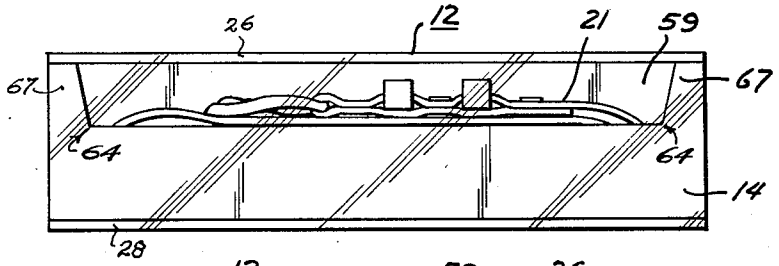


Fig. 13.



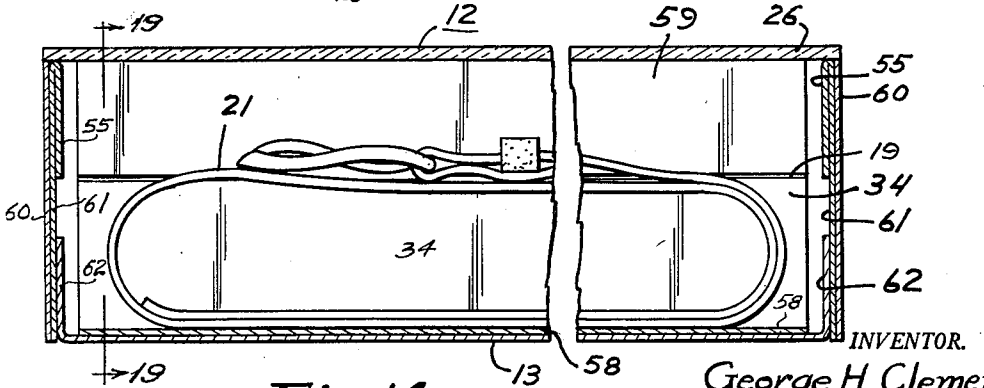


Fig. 14.

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Fig. 19

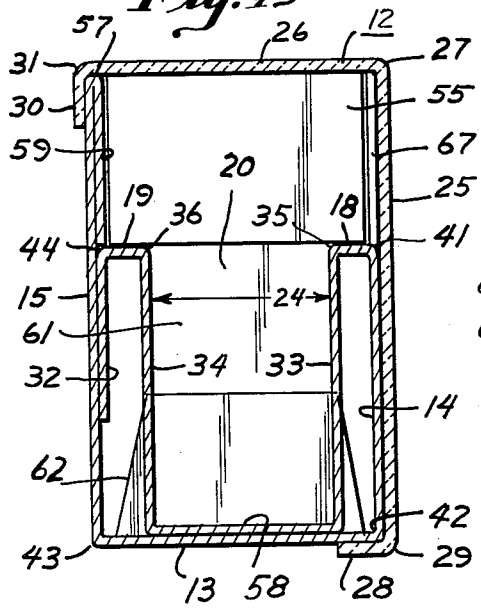


Fig. 18

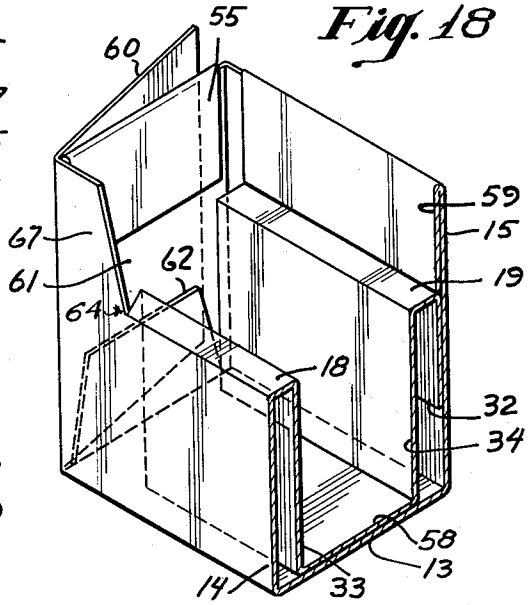
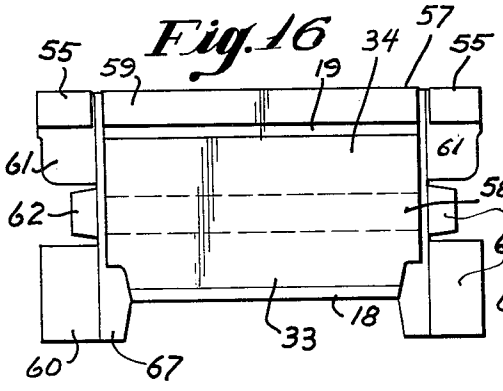


Fig. 16



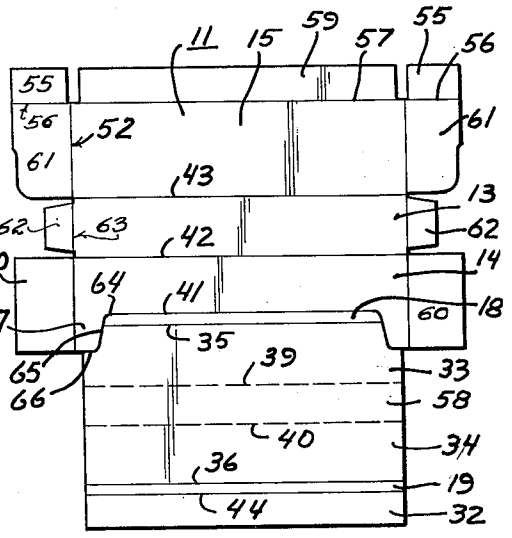


Fig. 15

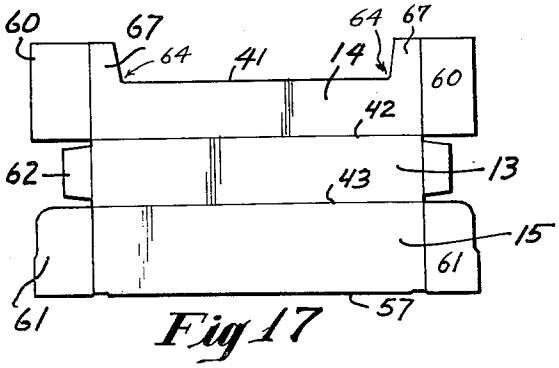


Fig 17

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United States Patent Office 3,044,605 Patented July 17, 1962

3,044,605

DISPLAY BOX

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Filed July 2, 1959, Ser. No. 824,601
6 Claims. (Cl. 206—45.14)

The present invention relates to a certain new and useful display box, for packaging belts and other articles, for counter display or for display in show-cases, and for serving also as the container in which the product may be merchandised or sold.

In the accompanying drawings, in which like reference characters indicate like parts:

FIGURE 1 represents a perspective view of a display box embodying the present invention, showing a belt therein.

FIGURE 2 represents a top plan view of the same.

FIGURE 3 represents a front elevational view of the same.

FIGURE 4 represents a section on line 4—4 of FIGURE 2.

FIGURE 5 represents a section on line 5—5 of FIGURE 4, on an enlarged scale.

FIGURE 6 represents a plan view of the blank of which the main body portion of the box or container is formed; shown on a reduced scale.

FIGURE 7 represents a top plan view of the body of the container, partly assembled, but flattened out and with the ends folded out into an open position, and with the central portion of the length of the box broken away, so as to reduce the space required for this view—this view being on the same scale as that of FIGURE 6.

FIGURE 8 represents a perspective view, partly in cross-section, of one end of the main body of the container, just prior to the folding of the end panels thereof into their final position.

FIGURE 9 represents a similar perspective view with the end folded in and just before the upper securing flap of the end is folded into the position shown in FIGURE 10.

FIGURE 10 represents a similar perspective view with the end completely formed.

FIGURE 11 represents a perspective view of a display box of a modified embodiment of my invention.

FIGURE 12 represents a top plan view of the same.

FIGURE 13 represents a front elevational view of the same.

FIGURE 14 represents a vertical cross-sectional view on line 14—14 of FIGURE 12.

FIGURE 15 represents a plan view of the blank of which the main body portion of the box or container of the modified embodiment (shown in FIGURES 11, 12, 13 and 14) may be formed—shown on a reduced scale.

FIGURE 16 represents a top plan view of the blank shown in FIGURE 15, partly assembled, but flattened out (this view being on the same scale as that of FIGURE 15).

FIGURE 17 represents a bottom plan view of the blank shown in FIGURE 15, in the same state of assembly as shown in FIGURE 16, but from the opposite side of the flattened-out partial assembly.

FIGURE 18 represents a perspective view, partly in

cross-section, of one end of the main body of the container, just prior to having its end-panels folded into their final position.

FIGURE 19 represents a transverse vertical cross-sectional view on line 19—19 of FIGURE 14.

According to the present invention the container is formed of two parts, namely, what may be called a main body formed of paper-board, designated generally by the numeral 11, and a closure member or portion designated generally by the numeral 12, formed of a transparent plastic of sufficient rigidity with form-retaining ability, to maintain its shape as a 2-sided sliding closure member with inturned flanges to guide it in an assembled and slidable relation to the main body 11.

The main body 11 includes a generally horizontal bottom 13, back 15 and front 14, and ends 16. The vertical dimension or height of the front 14 is substantially less than the corresponding vertical dimension or height of the back 15, as indicated particularly in FIGURES 1, 3, 5 and 8 to 10, and at a level corresponding to the top of the front 14, front and rear shelves or shoulders 18 and 19 are provided. Between the shelves 18 and 19 a well 20 is provided into which one or more loops of the belt 21 may be nested, in the manner indicated particularly in FIGURES 1 to 4, with the buckle end of the belt above the shelves 18 and 19 in the manner indicated in FIGURES 1 to 4, and with the side portions or members of the buckle 22 and with the laterally extending folds of the leather loops 23 resting on the shelves 18 and 19.

The width of the well 20 in the direction of the arrow 24 (FIGURE 5) is preferably just slightly greater than the width of the belt, so as to permit the nesting of the belt therein, and so as to permit the buckle 22 and the belt-loops 23 to extend out over and onto the shelves 18 and 19.

The ends 16 are of the full height of the back 15, as indicated in FIGURES 1, 3, 4, 5 and 10. The plastic closure portion 12 is formed of any suitable more or less rigid or form-retaining transparent plastic of suitable thickness, which is preferably injection-molded, so as to maintain its shape and to maintain the annular relationship of its four component portions referred to hereinafter.

The closure member 12 includes a front panel 25, a top panel 26, at right angles to each other, and connected with each other at the bend 27, and a lower horizontal guide-retaining flange 28 at the lower edge of the vertical front panel 25 and extending rearwardly therefrom and connected therewith at the bend 29, and an upper vertical guide and retaining flange 30 extending downwardly from the rear edge of the upper horizontal panel 26 and connected therewith through the bend 31.

Each of the panels 25 and 26 and each of the flanges 28 and 30 are the full length of the box, as indicated in FIGURES 1, 2, 3 and 5. The widths of the flanges 28 and 30 are just sufficient so as to resist the separation of the closure 12 from the main body 11 of the box, and to permit the closure to be slid longitudinally thereof—in which sliding motion the closure is guided by the upper edge of the back 15, the horizontal bottom 13 and the front 14 of the main body 11 and is also guided in part by the upper front corner of one of the two ends 16 or 17. However, the panels 25 and 26 of the closure 12 prefer-

ably also have just sufficient flexibility to permit the two panels **25** and **26** to be spread apart to an angle sufficiently in excess of the 90° shown in FIGURES 5 and 15 to bring the free longitudinal edge of one or the other of the flanges **28** and **30** clear of the corresponding longitudinal corner of the main body, so as also to permit the closure to be snapped on and off the main body.

The main body **11** may be formed of a single blank of paper-board of suitable thickness and stiffness. By reason of the manner of construction of the main body **11**, the paper-board may be comparatively thin, because of the bracing of the various panels thereof, when assembled.

The blank shown in FIGURE 6 includes the bottom **13**, the front **14**, the back **15**, and the ends **16**, adjacent to each other.

Immediately adjacent the front **14** is the shelf **18**. Adjacent the back **15** is the inner return-panel or rear-shelf-anchor panel **32** which is folded downwardly from the upper edge of the back **15**, along the fold-line **57**. Similar well-panels **33** and **34** are provided adjacent the shelf-panels **18** and **19**, respectively, which are turned folded downwardly from the shelf-panels **18** and **19**, in the manner indicated in FIGURES 5 and 8 to 10, along the fold-lines **35** and **36** to form the side walls of the well **20**. Pasting-flanges or well-anchor-flanges **37** and **38** adjoin the well-panels **33** and **34**, respectively, and are folded inwardly, towards each other, along the fold-lines **39** and **40**, and are pasted or adhesively secured to the inner surface of the bottom-panel **13**, in the manner indicated in FIGURES 5 and 7 to 10, with their free edges preferably abutting each other as indicated in these figures, thereby to insure that the bottom of the well will be of the same width as the top of the well or so as to fix the position of the bottom of the well by the abutting relationship of the free edges of the flanges **37** and **38**.

In forming the blank **6** into the main body **11**, the blank may be first folded along the fold-line **57** between the back-panel **15** and the return-panel **32**, and along the fold-line **41** between the front-panel **14** and the shelf-panel **18**, in the manner indicated in FIGURE 7. When so folded, the panels **18**, **33** and **37**, on the one hand, and the panels **32**, **19**, **34** and **38**, on the other hand, may all be flattened out on top of and against the front-panel **14**, bottom panel **13** and back-panel **15**, in the manner indicated in FIGURE 7. In this flattened condition, the pasting-flanges **37** and **38** may be pasted to the underlying bottom-panel **13**; preferably with the free longitudinal edges of the pasting-flanges **37** and **38** abutting each other, as indicated in FIGURE 7, so that the position of the pasting-flanges **37** and **38** will be correct in relation to the bottom-panel **13**, because the aggregate width of the shelf-panel **18**, well-panel **33** and pasting-flange **37** is equal to the width of the front-panel **14** and one-half the width of the bottom-panel **13**, while the aggregate width of the return-panel **32**, shelf-panel **19**, well-panel **34** and pasting-flange **38** is equal to the width of the back-panel **15** and one-half the width of the bottom-panel **13**.

When the flanges **37** and **38** have been so pasted in place to the inner surface of the bottom-panel **13**, the front-panel **14** and the back-panel **15** are raised up along the fold-lines **42** and **43**, respectively, whereupon the shelf-panel **18** folds horizontally along the fold-line **41** (and **35**) and the well-panel **33** folds along the fold-line **35** (and **39**), while the shelf-panel **19** folds inwardly along the fold-line **44** (and **36**) and the well-panel **33** folds downwardly along the fold-line **36** (and **40**), in the manner indicated in FIGURES 5 and 7 to 10.

All the fold-lines mentioned above, as well as the fold-lines referred to hereinafter, are preferably pre-scored, so that the folding of the paper-board along these fold-lines will take place automatically and accurately, as the panels are folded in respect to each other.

Each of the end-panels **16** is flanked by similar front and rear flanges **45** and **46**, along the scored fold-lines **47** and **48**. At each end of the front-panel **14** a similar flange **49** is provided along corresponding fold-lines **50**. Along each end of the rear-panel **15** a similar flange **51** is provided, along corresponding fold-lines **52**. The flanges **45** adjoin the flanges **49** along similar 45° fold-lines **53**, while the flanges **46** adjoin the flanges **51**, along corresponding 45° fold-lines **54**. A similar pasting-tab **55** is provided at the outer end of each of the end-panels **16**, with a fold-line or scoring-line **56** therebetween.

After the front and back have been raised into the position shown in FIGURE 8, the flanges **45** and **46** are folded inwardly upon the end-panels **16** thereof. The panels **49** are folded inwardly against the free edges of teh shelf-panel **18** and the well-panel **33**, while the panels **51** are folded inwardly against the free edges of the return-panel **32**, the shelf-panel **19** and the well-panel **34**, in the manner indicated in FIGURES 8 and 9 and also indicated in FIGURE 5. In this folding, the 45° fold-lines **53** and **54** will be disposed in the manner indicated in FIGURE 5. Thereafter, the pasting-tabs **55** are folded inwardly and down upon the flanges **45** and **51** and are pasted thereto, in the position shown in FIGURES 10 and 5.

For greater rigidity, the return-panel **32** is also preferably pasted to the contiguous or juxtaposed portion of the rear-panel **15**—this being done simultaneously with the pasting of the flanges **37** and **38** to the inner surface of the bottom-panel **13**, described above.

The outer surfaces of the flanges **49** and the contiguous portions of the outer surfaces of the flanges **45**, on the one hand, and the like contiguous surfaces of the flanges **51** and **46**, on the other hand, may also be pasted to each other for greater securement and rigidity, when the ends are folded up in the manner indicated in FIGURES 8 and 9. The pasting-tabs **55** may be of a length sufficiently great to extend downwardly to a point slightly beneath the shelf-panels **18** and **19**, so that the lower ends of the tabs **55** will also be pasted on to the upper portion of the inner surfaces of the flanges **49**.

In this manner a highly form-retaining main body is formed, having a centralized longitudinally-extending well spaced from the front and back panels, in which the belt (or the like) may be nested, so as to expose to view the upper portion thereof, above the shelves **18** and **19**.

By then sliding the transparent plastic closure-member onto the main body of the container or box, an effective display-packaging of the merchandise is achieved, for show-case or for counter-display, or for use in the ultimate sale of the merchandise.

In the embodiment shown in FIGURES 11 to 19, both shelf-panels **18** and **19**, both well-panels **33** and **34**, the rear shelf-anchor-panel **32** and a single bottom well-anchor-panel **58**, are formed in continuation of each other, and extend from the upper edge or fold-line **41** of the front panel **14**, in the order shown in FIGURE 15—the bottom well-anchor-panel **58** taking the place of the two bottom well-anchor-flanges **37** and **38** of the embodiment shown in FIGURES 1 to 10.

In the embodiment shown in FIGURES 11 to 19, a return panel **59** is folded down along the fold-line **57** at the top of the rear panel **15**, and is pasted to the inner surface of said rear panel **15**, and extends downwardly to the rear shelf **19**.

In this embodiment, two sets of end-panels **60** and **61** are provided, namely, the outer end-panels **60** adjoining the ends of the front panel **14** (and its upward extensions **67**) along the fold-lines **50**, and the inner end-panels **61** adjoining the ends of the rear panel **15** along the fold-lines **52**. In this embodiment, tabs **55** are provided at the upper ends of the inner end-panels **61**, along the fold-lines **56**, and these tabs are folded inwardly, down upon the inner end-panels and are pasted thereto, to provide the finished inner surface—these tabs **55** extending downwardly to the shelves **18** and **19**.

Tabs **62** are provided at the ends of the bottom-panel

13, along the fold-lines 63, and are folded upwardly, and may or may not have their outer surfaces pasted to the lower contiguous inner surfaces of the inner end-panels 61.

The inner surfaces of the outer end-panels 60 are, in turn, adhesively secured to the outer surfaces of the inner end-panels 61.

In the embodiment shown in FIGURES 11 to 19, the upper edge or fold-line 41 of the front-panel 14 terminates (at points 64) a substantial distance short of or inwardly of the ends of the front-panel, as indicated in FIGURE 11, and the front-panel 14 extends upwardly at its ends, along the inclined lines 65 and the upper horizontal lines 66, to the upper horizontal edges of the outer end-panels 60, thereby forming a pair of extensions 67 which rise upwardly to the top of the box. The front shelf-panel 18 and the front well-panel 33 are correspondingly shortened (along the lines 65 and 66).

In this embodiment, the pre-assembly or partial assembly of the box is as follows. The return-panel 59 is folded down upon the inner surface of the rear-panel or back-panel 15 of the box (along the fold-line 57) and is adhesively secured thereto. The rear shelf-anchor-panel 32 is folded inwardly along the fold-line 44, against the rear shelf-panel 19 and the rear well-panel 34. Adhesive is applied to the outer surface of the folded-over rear shelf-anchor-panel 32 and to the inner surface of the well-anchor-panel 58. Then the portion of the blank composed of the front shelf-panel 18, the front well-panel 33, the well-bottom-panel (or well-anchor-panel) 58, the rear well-panel 34 and the rear shelf-panel 19 (and the panel 32 turned inwardly, as stated above), is then folded over the rest of the blank, along the fold-line 41, so as to place the outer surface of the rear shelf-anchor-panel 32 against the inner surface of the back-panel 15, with the fold-line 44 adjacent to the lower edge of the down-folded panel 59. In this folded condition of the blank, the well-anchor-panel 58 will be superimposed on the bottom-panel 13, with its edges (or fold-lines) 39 and 40 spaced equidistantly from the edges (or fold-lines) 42 and 43, respectively, of the bottom-panel 13. Hence, the outer surface of the rear shelf-anchor-panel 32 is affixed to the inner surface of the back-panel 15 and the well-anchor-panel 58 is affixed to the bottom-panel 13, centrally thereof.

In this pre-assembly or partial assembly, the flaps or tabs 55 are also pasted down against the inner surfaces of the inner end-panels 61.

The flattened-out partial assembly, so produced, is shown in FIGURES 16 and 17.

To complete the box 11, the front and rear panels 14 and 15 are raised upwardly from the bottom 13, by folding them upwardly along the fold-lines 42 and 43. This automatically folds the shelf-panels 18 and 19 into a horizontal position and folds the well-panels 33 and 34 into a vertical position, along their corresponding fold-lines.

The tabs 62 are folded upwardly, and the inner end-panels 61 are folded inwardly, and their lower portions may or may not be pasted to the outer surfaces of the tabs 62. The outer end-panels 60 are folded inwardly, against the outer surfaces of the inner end-panels 61, and are pasted thereto.

Instead of the form-retaining plastic cover or closure member 12, a thin (non-form-retaining) flexible transparent sheathing may be applied over the box 11 of the embodiment shown in FIGURES 11 to 19, because the upper edges 66 of the front panel extensions 67 will give sufficient support to such sheathing to permit its use (instead of a form-retaining closure member). Such flexible sheathing may be adhesively secured to the front panel and the rear panel. However, a form-retaining closure, such as closure 12, may also be used in connection with the box of the embodiment shown in FIGURES 11 to 19.

The present invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and it is therefore desired that the present embodiments 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.

Having described embodiments of my invention, I claim the following:

1. A paper-board container including a bottom-panel, a front-panel, a back-panel, the back-panel being substantially higher than the major portion of the front-panel, a return-panel extending downwardly from the top of the back-panel, a shelf-panel extending inwardly from the top of the major portion of the front-panel, a shelf-panel extending inwardly from said back-panel, a pair of well-panels extending downwardly from the inner edges of said shelf-panels and having their lower edges secured to said bottom panel, and an end-panel at each end of said container of a height generally the same as the height of the back-panel.

2. A paper-board container including a bottom-panel, a front-panel, a back-panel, the back-panel being substantially higher than the major portion of the front-panel, a return-panel extending downwardly from the top of the back-panel, a shelf-panel extending inwardly from the top of the major portion of the front-panel, a shelf-panel extending inwardly from said back-panel, a pair of well-panels extending downwardly from the inner edges of said shelf-panels and having their lower edges secured to said bottom panel, and a slidable transparent plastic closure slidably mounted on said container for sliding movement in relation thereto, said closure including a front-panel of the same height as the back-panel of the container and a top-panel of the same width as the width of the bottom panel of said container and having retaining and guiding means associated with the lower edge of the front-panel thereof and with the rear edge of the top-panel thereof for slidably retaining it on said container.

3. The invention according to claim 2 wherein said closure is resilient whereby deflection of one of said panels in relation to the other is sufficient to free the retaining and guiding means from engagement with the container body panel, said retaining and guiding means comprising flanges each being of a width less than the bottom-panel and less than the height of said back panel of said container whereby the closure is snapped on or off the container body.

4. A paper-board container including a bottom-panel, a front-panel, a back-panel, the back-panel being substantially higher than the front-panel, a return-panel extending downwardly from the top of the back-panel, a shelf-panel extending inwardly from the top of the front-panel, a shelf-panel extending inwardly from said return-panel, a pair of well-panels extending downwardly from the inner edges of said shelf-panels and having their lower edges secured to said bottom panel, and an end-panel at each end of said container of a height generally the same as the height of the back-panel.

5. A paper-board container including a bottom-panel, a front-panel, a back-panel, the back-panel being substantially higher than the front-panel, a return-panel extending downwardly from the top of the back-panel, a shelf-panel extending inwardly from the top of the front-panel, a shelf-panel extending inwardly from said return-panel, a pair of well-panels extending downwardly from the inner edges of said shelf-panels and having their lower edges secured to said bottom panel, and a slidable transparent plastic closure slidably mounted on said container for sliding movement in relation thereto, said closure including a front-panel of the same height as the back-panel of the container and a top-panel of the same width as the width of the bottom panel of said container and having retaining and guiding means associated with the lower edge of the front-panel thereof and with the rear edge of the top-panel thereof for slidably retaining it on said container.

6. The invention according to claim 5, wherein said closure is resilient whereby deflection of one of said panels in relation to the other is sufficient to free the retaining and guiding means from engagement with the container body panel, said retaining and guiding means comprising flanges each being of a width less than the bottom panel and less than the height of said back panel of said container whereby the closure is snapped on or off the container body.

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