A shirt box has a collapsible (collapsed) state in which the sides of the collapsed box are defined by first and second fold lines that are part of the first set of fold lines and in the fully assembled (closed) state, the box has a substantially trapezoidal shape the sides of which are defined by a third fold line that is different from the first fold line and a fourth fold line that is different from the second fold line.
TRANSPARENT SHIRT BOX

TECHNICAL FIELD

[0001] The present invention relates to retail packaging and in particular, to a shirt box for displaying a shirt in an assembled state and being constructed to fold flat to permit easy bundling and shipping of a number of boxes.

BACKGROUND

[0002] In the retail sale of dress shirts and dress shirts and tie combinations, it is desirable to present the merchandise in a manner that permits potential customers to have a good look at the product. On the other hand, it is important for retailers to keep the product clean and free of any soil or stains that may result from handling, to protect against theft, and to maintain the shirts in an orderly and well-folded condition so that their displays remain attractive to passersby.

[0003] It is also desirable that the packaging that is used be economical to manufacturer, that it be made from a recyclable material, and that it be made with minimal waste.

[0004] It is also desirable to have a packaging that addresses the foregoing needs and which permits shirts to be stacked in great number to promote efficient shelf and display space usage.

[0005] The present invention satisfies these and other needs.

SUMMARY

[0006] A shirt box suitable for receiving one or more shirts includes a single sheet of substantially transparent plastic that has a plurality of fold lines formed therein including a first set of generally parallel fold lines and a second set of generally parallel fold lines. The box includes a series of first panels, each being separated from a next panel in the series by a respective fold line in the first set of fold lines. The first panels are foldable along the respective fold lines in a first direction to define a hollow central cavity for the shirt box. The box also includes a set of second panels each having a boundary along a respective fold line in the second set of fold lines to a respective first panel. The second panels are foldable along the respective fold lines in a second direction which is substantially perpendicular to the first direction to define first and second peripheral ends of the shirt box.

[0007] In this embodiment, the box includes first and second fastening panels that are part of the set of first panels that are attached to another along a fastening region to connect the set of first panels in series and define the central cavity. The shirt box has a collapsible (collapsed) state in which the sides of the collapsed box are defined by the first and second fold lines that are part of the first set of fold lines and in the fully assembled (closed) state, the box has a substantially trapezoidal shape that the sides of which are defined by a third fold line that is different from the first fold line and a fourth fold line that is different from the second fold line.

[0008] These and other aspects, features and advantages shall be apparent from the accompanying Drawings and description of certain embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. 1 is a top plan view of a first embodiment of the invention in an unfolded substrate form;

[0010] FIG. 2 is a partial top plan view of the embodiment of FIG. 1 showing the box in a partially folded collapsed state;

[0011] FIG. 3 is a perspective view of one end of the embodiment of FIG. 1 in a first partially folded state;

[0012] FIG. 4 is a perspective view of one end of the embodiment of FIG. 1 in a second partially folded state;

[0013] FIG. 5 is a perspective view of one end of the embodiment of FIG. 1 in a closed state showing securement of an end panel;

[0014] FIG. 6 is a perspective view of the box of the embodiment of FIG. 1 in the closed state with a pair of shirts contained therein;

[0015] FIG. 7 is a top plan view of the box of FIG. 1 with a tuxedo arrangement contained therein; and

[0016] FIG. 8 is a bottom plan view of the embodiment of FIG. 7.

DETAILED DESCRIPTION OF CERTAIN EMBODIMENTS OF THE INVENTION

[0017] Referring to FIGS. 1-8, a shirt box container 500 is made from a substrate 510 in the form of a transparent plastic sheet having a series of fold lines generally designated F1 and F2. The fold lines F1 are generally parallel and preferably are parallel to one another and can be characterized as being vertical fold lines that run from one end of the container to the opposite other end. The fold lines F2 are also generally parallel and preferably are parallel to one another and can be characterized as being horizontal fold lines. The fold lines F1, F2 define boundaries of respective panels of the substrate 510.

[0018] More specifically, the substrate 510 is divided into a number of different panels that define particular segments or regions of the substrate 510. A series of first panels 512 all fold in a first direction and include panels 520, 522, 524, and 526. Each of these panels 520, 522, 524, 526 is disposed adjacent another panel in the series and is separated from a next panel by one of the fold lines F1. As shown in FIGS. 1-6, the first series of panels 512 is foldable along the fold lines F1 along a common, parallel direction to define a hollow central cavity for the shirt box. Two of these panels, namely, panels 520, 524, form a top wall (panel 524) and a bottom wall (panel 520), as well as a pair of side walls that are defined by panels 522, 526. As shown in FIG. 6, when the box 500 is assembled, the box 500 has a trapezoidal shape in that it is a quadrilateral with two sides parallel.

[0019] In the illustrated embodiment, each of the panels 520, 524 has a generally rectangular shape and the widths of the panels 520, 524 are preferably equal. In addition, the panels 522, 526 also have a generally rectangular shape, with the panel 522 being disposed between the panels 520, 524 and the panel 526 being formed on the other side of the panel 524. The panels 522, 526 have widths that are preferably equal to one another but are less than the width of the panels 520, 524.

[0020] Referring now to FIG. 1, the second series of panels 514 includes a pair of end panels 530 that have a boundary along the fold lines F2 to the panel 520. The end panel 530 is defined by two parallel edges 532, one of which defines the fold line F2, and a first end edge 534 that is perpendicular to edges 532 and a beveled end edge 536 that is formed at an angle to the edges 532. The end edge 536 is formed at an angle other than 90 degrees and therefore it is
not parallel to the first end edge 534. The outer edge 534 has a greater width than the inner edge 534 as illustrated.

[0021] On one side of each end panel 530, a flap 560 is provided. The flaps 560 are bounded along one margin at the fold lines F2 to the panel 522. The flap 560 thus folds about fold line F2 and is generally in the shape of a trapezoid in that it includes two non-parallel side edges 562. It will be appreciated from FIG. 1, that the distance that the flap 560 extends from fold line F2 (the inner edge of the flap) is less than the distance that the end panel 530 extends from fold line F2. In other words, the outer edge of the end panel 530 is at a greater distance from the fold line F2 than the outer edge of the flap 560 as illustrated.

[0022] The panel 522 is bounded at its ends by the flaps 560 and along its sides by panel 520 and 524. In other words, the panel 522 is disposed between the panels 520 and 524 and is joined thereto along fold lines F1.

[0023] On the other side of the panel 520 and the end panel 530, a first fastening panel 550 is formed and includes a main section 552 that extends between fold lines F2 and thus has a general rectangular shape and end sections 554 that extend from the fold lines F2 to the outer edge of the end panel 530. The end sections 554 thus extend the same distance from the fold lines F2 as the end panel 530; however, each end section 554 has a generally triangular shape, with the hypotenuse of the triangle being defined by an edge 556. The other two sides of the end section 554 are defined by the end edge 534 and the edge 532 that defines the fold line F2.

[0024] A free edge 558 of the fastening panel 550 and in particular, of the panel 520, represents a free edge that is used to construct and configure the substrate 510 into its sealed folded construction shown in FIG. 6. This aspect will be described in greater detail below. The free edge 558 includes first fastening elements 551 that serve to fasten and securely attach the substrate 510 into its assembled but folded collapsed state.

[0025] A pair of end panels 540 is also provided and is constructed to have a boundary along the fold lines F2 to the panel 524 which is located between panels 522 and 526 and is joined thereto along fold lines F1. The end panel 540 is defined by two parallel edges 542, one (inner edge) of which defines the fold line F2 and the other is an outer edge of the end panel 540. The end panel 540 has a trapezoid shape and is therefore, also defined by a pair of angled edges 544. The angled edges 544 are tapered inward toward the fold line F2 so as to cause the inner edge (the fold line F2) to have a lesser width than the outer edge 542.

[0026] In the embodiment of FIGS. 1-6, the panels 540 further includes end flaps 580 which fold about fold line F2 and which are joined to the outer edges (outer edge 542) of the panels 540. The end flap 580 similarly has a trapezoid shape and is defined by the edge 542 at fold line F2 and an outer edge 582, with a pair of angled edges 584 extending between edges 542, 582. In an opposite manner relative to the end panel 540, the end flap 580 is constructed so that the outer edge 582 has a less width than the width of the inner edge (F2 fold line/edge 542).

[0027] As can be seen, a slit 561 separates the flap 560 and the adjacent panel 540 and therefore, permits folding of the flap 560. There is a gap between the other side edge 562 of the flap 560 and the adjacent panel 530 and therefore, there is no slit present in this location.

[0028] As illustrated in FIG. 1, each of the panels 520, 522, 524 and 526 has a rectangular shape, with the width of the panels 522, 526 being less than a width of the panels 520, 524. The panels 520, 524 can have the same dimensions and shapes and the panels 522, 526 can have the same dimensions and shapes.

[0029] On one side of each panel 540, a flap 570 is provided. The flaps 570 are bounded along one margin at the fold lines F2 to the panel 526. The flap 570 thus folds about fold line F2 and is generally in the shape of a trapezoid in that includes two non-parallel side edges 572 and an outer edge 574. It will be appreciated from FIG. 1, that the distance that the flap 570 extends from fold line F2 (the inner edge of the flap) is less than the distance that the outer edge 542 of the end panel 540 extends from fold line F2. In other words, the outer edge 542 of the panel 540 is at a greater distance from the fold line F2 than the outer edge 574 of the flap 570 as illustrated. Preferably, the distances that the flaps 560, 570 extend from the panels 522, 526, respectively, are equal and therefore, the outer free edges of the lie in the same plane.

[0030] Similar to the flap 560, the flap 570 is defined by the pair of side edges 572 that are angled with respect to the fold lines F2 and outer edge 574, with one of the side edges 572 being formed by a slit or cut that also defines one of the edges 542 of the panel 540.

[0031] One the other side of the panel 526 and the flaps 570, a second fastening panel 590 is formed and includes a main section 592 that extends between fold lines F2 and extends from the fold line F1. The main section 592 can generally have a trapezoid shape and is defined by an inner edge 594 (fold line F1), an outer edge 596 that is parallel to the inner edge 594 and has a lesser length, and a pair of end edges 598 that extend between the inner edge 594 and the outer edge 596. The edges 598 are angled relative to the edges 594, 596.

[0032] The second fastening panel 590 is similar to and complementary to the first fastening panel 550 with the exception that the second fastening panel 590 does not include the end sections 554 that are present as part of the first fastening panel 550.

[0033] The outer edge 596 of the fastening panel 590 represents a free edge that is used to construct and configure the substrate 510 into its sealed folded construction shown in FIG. 2. This aspect will be described in greater detail below. The free edge 596 includes second fastening elements 591 that are complementary to the first fastening elements 551 and serve to fasten and securely attach the substrate 510 into its assembled but folded state shown in FIG. 2.

[0034] As can be appreciated from FIGS. 1-6, the panels 530, 540 and flaps 560, 570, 580 are foldable along their respective fold lines F2 in a direction which is substantially perpendicular to the direction of fold lines F1. In folding the above panels, peripheral ends of the shirt box 500 are defined.

[0035] In accordance with a salient aspect of the present invention, the shirt box 500 can be configured in a partially assembled state in which a hollow central cavity for containing one or more shirts or one or more shirt and tie combinations is defined, yet which is collapsible into a generally flat state until such time that one or more shirts (or a shirt and tie combination) are to be inserted into the box. When the shirt box 500 is to be filled, it is brought to an
uncollapsed state, the shirt is introduced into the hollow cavity, and the peripheral ends of the shirt box are bonded so as to define a substantially rectangular and sealed shirt box construction.

[0036] The first and second fastening elements 551, 591 are designed to interlockingly mate together for permanently connecting the panel 590 to the panel 550. According to one embodiment and as illustrated, the fastening elements 551, 591 are in the form of an interlocking based structure or a crimped based structure where the two panels 550, 590 are securely connected to one another so as to form a closed box blank that and be stored flat prior to use. When the securement technique is an interlocking based structure, the elements 551, 591 when pressed together interlock with one another. The elements 551, 591 can thus be a snap-fit based system that interlocks with one another when mated together.

[0037] With further reference to FIGS. 1-6, the shirt box 500 can further include first and second double sided tape members 600 that have a first side in adhesive contact with a respective panel in the second set of panels. As illustrated in FIG. 1, the double-sided tape member 600 is disposed on end panel 580. A second side of the double-sided tape member 600 includes a removable strip 612 (best seen in FIG. 4) which overlies the second side of the tape member 600. The removable strip 612 maintains the second side of the tape member 600 free of stickiness so that shirt boxes 500 can be stacked in a collapsed state without sticking to one another. However, the removable strip 612 can be separated from the second side of the tape member 600 by releasing it in the direction of arrow A so as to expose an adhesive surface which permits engagement of one panel 580 with another panel 520 (see FIGS. 4-5). Once the panels 580, 520 have been adhesively joined by the tape member 600, the shirt box 500 is in the state in which the hollow central cavity is sized to receive one or more shirts.

[0038] Preferably, the material of the substrate has a thickness so that, in combination with the fold lines F1 and F2, a stable, second state results in which the shirt boxes 500 can be stacked in great number, one upon another, to promote efficient shelf and display space usage.

[0039] In order to facilitate folding of the shirt box, in a preferred form, the end panels 530, 540, 580 can have chamfered corners adjacent their respective free ends. The chamfered corners reduce interference of one panel member with another as the box 500 is folded.

[0040] In the assembled, folded state, the angled sides of the trapezoidal shape box 500 are defined by panels 522, 526 and the top is defined by panel 524 and the bottom is defined by panel 520. In the assembled state, the ends of the box 500 are defined by the folded panels 530, 540 and flaps 560, 570. When the box 500 is fully assembled into the folded state of FIGS. 5-6, the panel 530 and the corresponding end section 554 of the first fastening panel 550 lie in the same plane.

[0041] In one embodiment of the present invention, the side edges of the partially folded, collapsed box 500 shown in FIG. 2 are defined by side edges that are different than the side edges that define the sides of the fully assembled box 500 as shown in FIG. 6. More specifically, in the partially folded, collapsed state, one side edge of the box 500 is defined by the fold line F1 between panels 522, 524, while the other side edge of the box 500 is defined by the fold line F1 between the first fastening panel 550 and the panel 520. In contrast, when the box 500 is further folded from the collapsed state of FIG. 2 to the assembled, fully folded, closed state of FIG. 6, both of the side edges of the box 500 are different than the two side edges in the collapsed state. In particular, one of the side edges is defined by the free edge 558 of the first fastening panel 550 which is joined to the edge 596 of the second fastening panel 590, and the other side edge of the box 500 is defined by the fold line F1 between the panels 520, 522. It will therefore be appreciated both fold lines F1 associated with the first fastening panel 550 define the side edges of the box 500 in both the collapsed state of FIG. 2 and the assembled, closed state of FIG. 5. This is due to the fact that the first fastening panel 550 is folded over the panel 520 in the collapsed state and is then folded so that it is in the same plane as the panel 550 in the closed state of FIG. 5.

[0042] In the flat storage position (collapsed state) that allows a number of boxes 500 to be easily stacked on top of one another, the box 500 is folded about the fold line F1 between the panels 522, 524 so that the panel 524 is disposed above and lies across a portion of the panel 520 and a portion of the panel 522 and both panels 526, 590 lie above the panel 520. The outer edge 596 of the fastening panel 590 does not extend all the way to the fold line F1 that is formed between the panel 520 and the fastening panel 550. In this orientation, the flaps 570 lie above the end panel 530 but do not extend all the way to the outer edge of the end panel 530. Each end panel 540 is disposed over a portion of the portion of the end panel 530 and one flap 560. The outer edge 542 of the end panel 540 preferably overlies the outer edge 532 of the underlying end panel 530 in this folded construction. The outer edge of the underlying flap 560 does not extend to the fold line F2 that is defined by the overlying outer edges of the end panels 530, 540.

[0043] One angled edge 544 of the end panel 540 that is adjacent the flap 570 is disposed over the end panel 530, while the other angled edge 544 does not overlap any structure and is angled outwardly from the fold line F1 between the panels 522, 524 and therefore, the tip where the angled edges 544 and 584 intersect represents the furthest point of one side of the unassembled, folded, collapsed box 500.

[0044] In the unassembled, folded, collapsed position of FIG. 2, the two side edges of the folded box are defined by the fold line F1 defined between the panels 522, 524 and the fold line F1 defined between the fastening panel 550 and the panel 520.

[0045] In the folded, closed position of FIG. 6, the fastening panel 550 is folded about the fold line F1 between the fastening panel 550 and the panel 520 and the end sections 554 are thus folded over the end panel 530. The free edge 558 of the fastening panel 550 is positioned proximate the fold line F1 between the fastening panel 590 and the panel 526. When the fastening panel 550 is folded over, as shown, the first and second fastening elements 551, 591 generally align with one another in an overlapping manner to permit the interconnection/fastening thereof. As discussed above, when the fastening elements 551, 591 are in the form of interlocking structures, the elements 551, 591 are joined together using appropriate tools. In the case of snap-fit elements, the elements 551, 591 are joined and mated to form an interlocking snap-fit connection between the elements 551, 591 or in the case of a crimp, using crimping tools.

[0046] To construct and assemble the box 500 into its normal condition for use as shown in FIG. 6, the box 500 is
first formed by cutting a plastic sheet to have the shapes and cuts shown in FIG. 1 and is then folded about the fold line F1 between the panels 522, 524 and the fastening panel 550 is folded and the fastening elements 551, 591 are joined to yield, the folded construction described above and shown in FIG. 2. Next, the folded box 500 is manipulated by raising the panels 526, 526 relative to panel 520 by folding the structure about the fold line F1 between the panels 520, 522 as shown in FIG. 3. As the panel 524 is raised in the manner, the panel 522 no longer fits flat but starts to pivot upward at an increasing angle relative to the panel 520 and simultaneously, the panel 526 begins to lift away from its initially flat position by pivoting about the fold line F1 between the fastening panel 550 and the panel 520 (the side edge of the folded box).

[0047] As the panel 524 continues to be raised and the panels 522, 526 pivot upwardly toward an axis that is normal to the panel 520, the end panels 540 are also raised and assume a position above the end panels 530, with the flaps 560, 570 being positioned between the end panels 530, 540. As the panel 524 is raised, the flaps 560, 570 move in direction that causes them to become more normal relative to the underlying panel 520. In this initial movement, the end sections 554 begin to pivot upwardly about the first end edge 534 (F1 fold line between the end section 554 and the end panel 530).

[0048] In this intermediate position, the end sections 554 are close to or even in a perpendicular orientation relative to the end panel 530 and the panel 522 can likewise be in position where the panel 522 is substantially perpendicular to the panels 520, 524 as shown in FIG. 3. When the ends sections 554 and the panel 522 are in perpendicular orientations, the panel 526 is at an angle other than 90° relative to the panel 520.

[0049] To go from the intermediate position to the final, closed position of FIG. 6, the box 500 is manipulated to cause the free edge 550 of the fastening panel 550 and the fold line F1 between the panel 526 and the fastening panel 590 to become the side edge of the complete, assembled box 500 structure. This is done by pushing down on in the area where the fastening panels 550, 590 are joined (i.e., near or along the joined fastening elements 551, 591) and then tucking the fastening panel 550 underneath the panel 526 by causing the first fastening panel 550 to lie flat and in the same plane as the panel 520 (as well as the same plane as the end panel 130 prior to its folding) as shown in FIG. 4. This is accomplished by folding the first fastening panel 550 about the fold line F1 between the first fastening panel 550 and the panel 520. In other words, the original side edge of the folded box construction, namely, the fold line F1 between the end panel 550 and the panel 520 no longer is the side edge of the assembled box 500 shown in FIG. 5. Similarly, the other side edge of the box 500 is different in the collapsed and closed states in that in the collapsed state, the side edge is defined by the fold line F1 between the panels 522, 524 and in the closed state, the side edge is defined by the fold line F1 between the panels 520, 522.

[0050] As a result of folding the first fastening panel 550 in this manner into a position where it lies in the same plane as the panel 520, the two panels 522, 526 of the box 500 form and define the two angled sides of the trapezoid shaped box 500. The assembly of the box 500 is then completed by bending the flaps 560, 570 inwardly towards the interior compartment of the box 500 (e.g., folded over towards the panels 522, 526, respectively) and then the end panels 530, including the end sections 554, are folded up towards the folded flaps 560, 570 and brought into contact therewith to close off the interior compartment of the box 500. As shown, the combination of the end section 554 and the adjoining end panel 530 itself defines a trapezoid shaped end.

[0051] The final sealing of the box 500 is performed by folding down the end panel 540, at the fold line F2 between panels 540, 524 so as to fold the panel 540 over the folded end panel 530 so that the trapezoid shaped end panel 540 lies over the complementary trapezoidal shaped end panel 530, with one angled edge 544 being generally aligned with and overlaying the edge 556 associated with the end section 554 and the other angled edge 544 being aligned with and overlaying the edge 536. The end flap 580 is then folded about the fold line F2 so as to position the end flap 580 on an underside (bottom surface) of the panel 520. To secure the end flap 580 to this underside surface of the panel 520, the removable strip of the double-sided tape member 600 is removed so as to expose the second side of the tape member 600, thereby exposing an adhesive surface which permits the engagement of the end panel 580 with the underside of the panel 520. Once the panels 580 have been adhesively joined by the tape member 600, the shirt box 500 is in the second state, namely, the assembled state, in which the hollow central cavity is sized to receive one or more shirts.

[0052] It will be appreciated that the areas of the end section 554 and the end panel 530 is about equal to the area of the end panel 540 which, unlike the end panel 530 does not include a fold line F1 since these two structures mate together as described herein. In addition, the bottom of the box 500 is defined by the panel 520 and the first fastening panel 550, while the top of the box 500 is defined by the panel 524.

[0053] The fold lines F1 and F2 can be continuous or discontinuous, but preferably are continuous and more preferably comprise score lines in the substrate 520.

[0054] The set of first panels of the shirt box 500 thus includes a bottom panel 520, a top panel 524 and a pair of side panels 522, 526 that extend between the bottom and top panels 510, 524, each of the first and second side panels 522, 526 being formed at an angle other than 90 degrees with respect to the top panel 524 and the bottom panel 520. In the collapsed box, one side panel 522 lies adjacent and in the same plane as the bottom panel 520, while the other side panel 526 lies above the bottom panel 520 and in a different plane. The first fold line is formed between the first fastening panel 550 and the bottom panel 520 that is part of the first set of panels, wherein in the collapsed box 500, the first fastening panel 550 is folded over the bottom panel 520, while in the assembled state, the first fastening panel 550 and the bottom panel 520 lie at least substantially in the same plane.

[0055] It will be appreciated that the box 500 is constructed to receive and display one or more shirts. For example, when displaying two shirts, the shirts are arranged side by side and one shirt can at least partially overlie the other shirt so that both collars of the shirts are spaced apart and fully visible. It is also possible for one or more of the shirts to include a tie as described above with reference to previous embodiments.

[0056] Now referring to FIGS. 7-8 in which a new application for the shirt box 500 is shown. In this embodiment, the shirt box 500 contains a tuxedo shirt arrangement 700
that includes a tuxedo shirt 710 that is arranged in a folded manner so that a collar 712 thereof is visible through the top panel 524 and sleeves 714 of the shirt 710 are folded over the front of the shirt 710 so that cuff links 716 that are already inserted and secured through button holes of the sleeves 714 are visible through the top panel 524. The shirt 710 has a bow tie 720 that is arranged around the collar 712 in the standard position and manner of wear so that once again, the consumer is shown how the bow tie 720 looks in its standard location. A clip or the like can be used to attach the bow tie 720 to the shirt 710 so that the bow tie 720 does not move relative to the shirt 710 during transportation or display.

[0057] The shirt 710, along with the attached bow tie 720 and cuff links 716, occupy a first section of the central cavity of the box 500, while a cummerbund 730 is disposed in and occupies a second section of the central cavity that is adjacent the first section. The cummerbund 730 can be folded so that its folded length is about the same as the length of the folded shirt 710. As is well known, the cummerbund 730 has a pair of free ends or straps 732, 734 that are releasably attached to one another, as by a hook or buckle type mechanism. In one aspect of the invention, a support structure 740, such as a piece of cardboard, is provided to support the folded cummerbund 730 and help locate and confine the cummerbund 730 to the second section of the box 500. The support structure 740 thus has a length that is about the same as the length of the folded shirt 710. The folded cummerbund 730 can be further secured to the support structure 740 by any number of different means, including, the use of a clip or the like (this further ensures that the cummerbund 730 will not move excessively relative to the support structure 740). By placing the cummerbund 730 in the second section of the box next to the folded shirt 710 in the first section, the consumer can view the cummerbund 730 directly next to the folded shirt 710. The consumer can thus view the complete tuxedo shirt arrangement prior to purchase to select the desired tuxedo shirt design.

[0058] In one aspect of this embodiment, one of the panels 540 contains a hanger 750 that has a hook member 752 to permit the box 500, with the tuxedo shirt arrangement 700 contained therein for display to the consumer. The hanger 750 includes a body portion 754 from which the hook member 752 extends and the hanger 750 is preferably attached to the panel 540 by securely attaching an underside of the body portion 754 to the outer face of the panel 540. The hanger 750 can be attached using any number of different techniques, including using an adhesive (e.g., glue or cement) or by otherwise bonding or welding the hanger 750 to the panel 540.

[0059] It will also be appreciated that the tuxedo arrangement 700 does not have to include the cummerbund 730 and support structure 740 but instead, the shirt box 500 can contain only the folded shirt 710, along with the bow tie 720 and cuff links 716.

[0060] As with the earlier embodiment, the shirt box 500 can be formed with hole 90 in one of the panels that forms the box 500. Hole 90 is positioned such that the outline of the hole overlies a portion of the shirt or the tuxedo arrangement. This arrangement provides access to the garments inside the shirt box 500 so that consumers can touch and feel the garments yet does not compromise the structural integrity of the box 500. It will be appreciated that the shape and size of the hole 90 are not critical and the hole 90 is therefore not limited to having an oval shape.

[0061] While the invention has been described in connection with certain embodiments thereof, the invention is capable of being practiced in other forms and using other materials and structures. Accordingly, the invention is defined by the recitations in the claims appended hereto and equivalents thereof:

What is claimed is:

1. A shirt box suitable for receiving one or more shirts comprising:
   a single sheet of substantially transparent plastic;
   a plurality of fold lines in the plastic sheet including a first set of generally parallel fold lines and a second set of generally parallel fold lines;
   a series of first panels each being separated from a next panel in the series by a respective fold line in the first set of fold lines, the first panels being foldable along said respective fold lines in a first direction to define a hollow central cavity for the shirt box; and
   a set of second panels each having a boundary along a respective fold line in the second set of fold lines to a respective first panel, the second panels being foldable along said respective fold lines in a second direction which is substantially perpendicular to the first direction to define first and second peripheral ends of the shirt box;
   wherein first and second fastening panels that are part of the set of first panels are attached to another along a fastening region to connect the set of first panels in series and define the central cavity;
   wherein the shirt box has a collapsible state in which the sides of the collapsed box are defined by first and second fold lines that are part of the first set of fold lines and in the assembled state, the box has a substantially trapezoidal shape the sides of which are defined by a third fold line that is different from the first fold line and a fourth fold line that is different from the second fold line, wherein the first fastening panel is defined by the first and third fold lines.

2. The shirt box of claim 1, wherein the third fold line comprises the fastening region and defines one side of the box in the assembled state.

3. The shirt box of claim 1, wherein the second set of panels includes a first end panel and a second end panel that are bounded along the second set of fold lines to a bottom panel that is part of the first set of panels and defines a bottom of the shirt box in the assembled state, wherein each of the first and second end panels is intersected and partitioned into first and second sections by one fold line of the first set of fold lines.

4. The shirt box of claim 3, wherein the one fold line defines an inner edge of the first fastening panel.

5. The shirt box of claim 3, wherein the first section has a triangular shape.

6. The shirt box of claim 5, wherein a hypotenuse of the triangle intersects one end of the fastening region and one edge of the end panel.

7. The shirt box of claim 5, wherein each of the first and second end panels has a trapezoidal shape with one beveled side edge being a free edge of the first section and another beveled side edge being a free edge of the second section.
8. The shirt box of claim 3, wherein in the collapsed box, the first section is folded over a portion of the second section.

9. The shirt box of claim 7, wherein in the collapsed box, the pair of beveled edges that define the trapezoidal shape of the end panel when the box is assembled are substantially parallel to one another.

10. The shirt box of claim 1, wherein the first and second fastening panels are attached to one another by a crimped structure.

11. The shirt box of claim 1, wherein the set of first panels includes a bottom panel, a top panel and a pair of side panels that extend between the bottom and top panels, each of the first and second side panels being formed at an angle other than 90 degrees with respect to the top panel and the bottom panel.

12. The shirt box of claim 11, wherein in the collapsed box, one side panel lies adjacent and in the same plane as the bottom panel, while the other side panel lies above the bottom panel and in a different plane.

13. The shirt box of claim 1, wherein the first fold line is formed between the first fastening panel and a bottom panel that is part of the first set of panels, wherein in the collapsed box, the first fastening panel is folded over the bottom panel, while in the assembled state, the first fastening panel and the bottom panel lie at least substantially in the same plane.

14. The shirt box of claim 1, further including first and second double-sided tape members, each tape member having a first side in adhesive contact with a respective second panel and having a second side; and
   first and second removable strips overlying the second side of the first and second double-sided tape members, respectively,

wherein in a first state, the first and second removable strips overlie the first and second tape members, and a second state in which the second side of at least one of the tape members is in adhesive contact with one of the panels and in which the hollow central cavity is sized to receive one or more shirts.

15. A shirt box suitable for receiving one or more shirts comprising:

   a single sheet of substantially transparent plastic;
   a plurality of fold lines in the plastic sheet including a first set of generally parallel fold lines and a second set of generally parallel fold lines;
   a series of first panels each being separated from a next panel in the series by a respective fold line in the first set of fold lines, the first panels being foldable along said respective fold lines in a direction to define a hollow central cavity for the shirt box; and
   a set of second panels each having a boundary along a respective fold line in the second set of fold lines to a respective first panel, the second panels being foldable along said respective fold lines in a second direction which is substantially perpendicular to the first direction to define first and second peripheral ends of the shirt box, the set of second panels including a pair of first end panels;

wherein first and second fastening panels that are part of the set of first panels are attached to another along a fastening region to connect the set of first panels in series and define the central cavity, the first fastening panel being defined by an inner edge that is included in the first set of fold lines and intersects and partitions each of the first end panels into two sections; wherein the shirt box has a collapsed state in which the first fastening panel is folded about its inner edge so as to fold one section of the first end panel over the other section thereof, while in the assembled state, the box has a substantially trapezoidal shape and the first fastening panel is unfolded so that the two sections have a trapezoidal shape.

16. A combination of tuxedo clothing articles packaged for sale within a substantially transparent box comprising:
   a folded shirt having a collar;
   a necktie supported by the shirt;
   a folded cummerbund supported by a support structure; and
   the transparent box of claim 1, wherein the folded shirt and necktie are disposed in a first section of the central cavity of the box and the folded cummerbund and the support structure are disposed in a second section of the central cavity that is adjacent the first section.

17. The combination of claim 16, wherein the support structure comprises a piece of cardboard.