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SCOTT

(54) **CONTAINER BOX HAVING CONCEALED INFORMATION ZONES**

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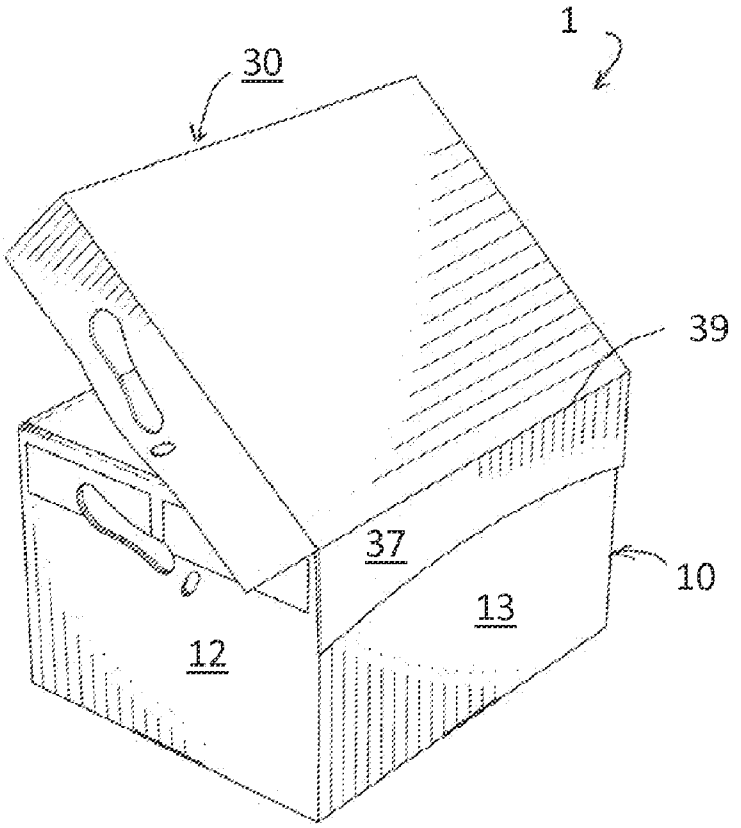
USPC **206/459.5**; 220/351; 220/676; 220/845

(57) **ABSTRACT**

A two-piece box convertible into a one-piece box, having a main box body and a lid for covering the top opening of the box, having a skirt around the periphery of the lid, a panel of the skirt having a pivoting hinge connection to the lid, and having at least one attachable portion on the inner surface of the panel for fixing the panel to the top of one of the side panels of the box. The box can also include a corrugated, strengthening insert to strengthen the side panels of the box for resisting deformation and collapse under weight loads. The box can also include concealable zones for information positioned adjacent to the top edge of the side panels of the main box for receive readable information.



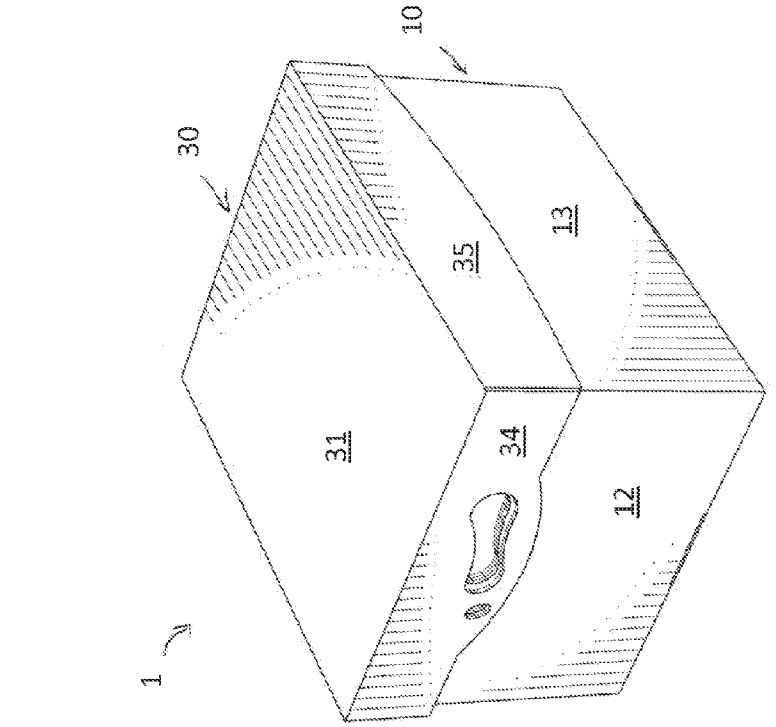


FIG. 2

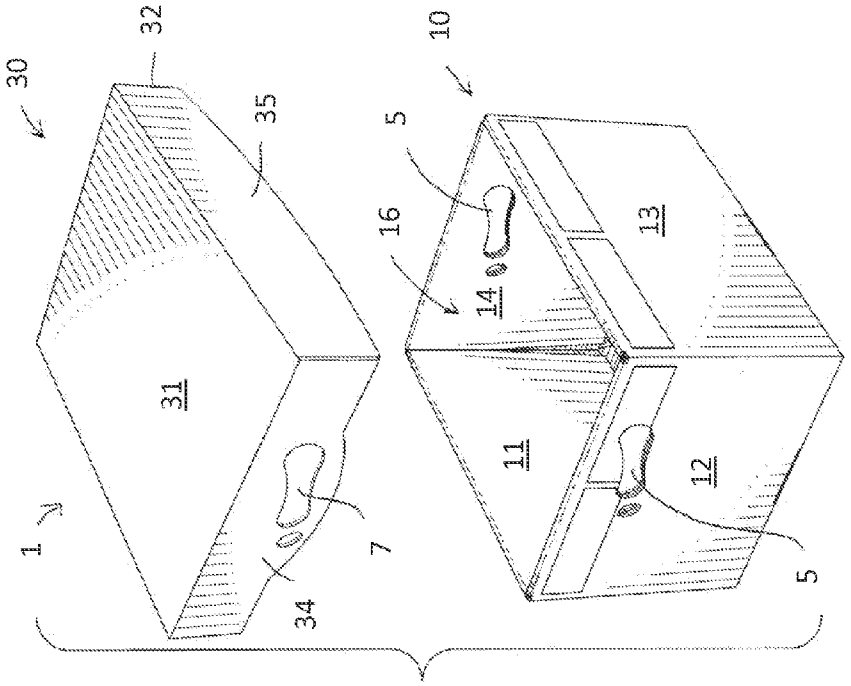


FIG. 1

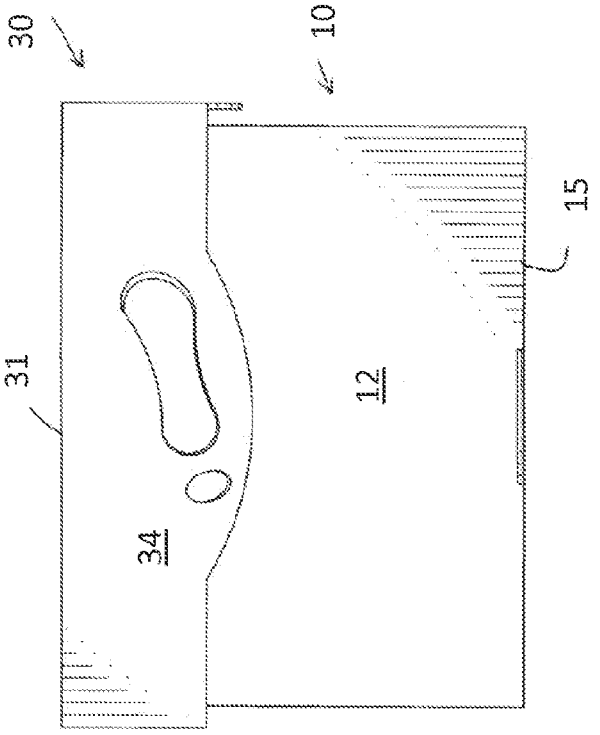


FIG. 4

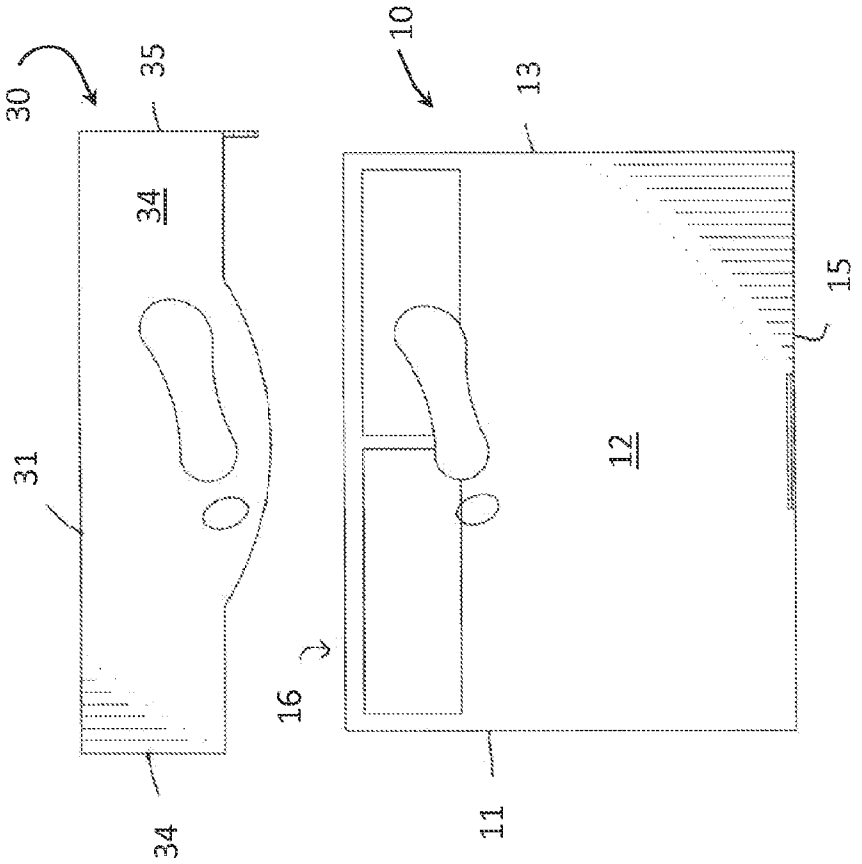


FIG. 3

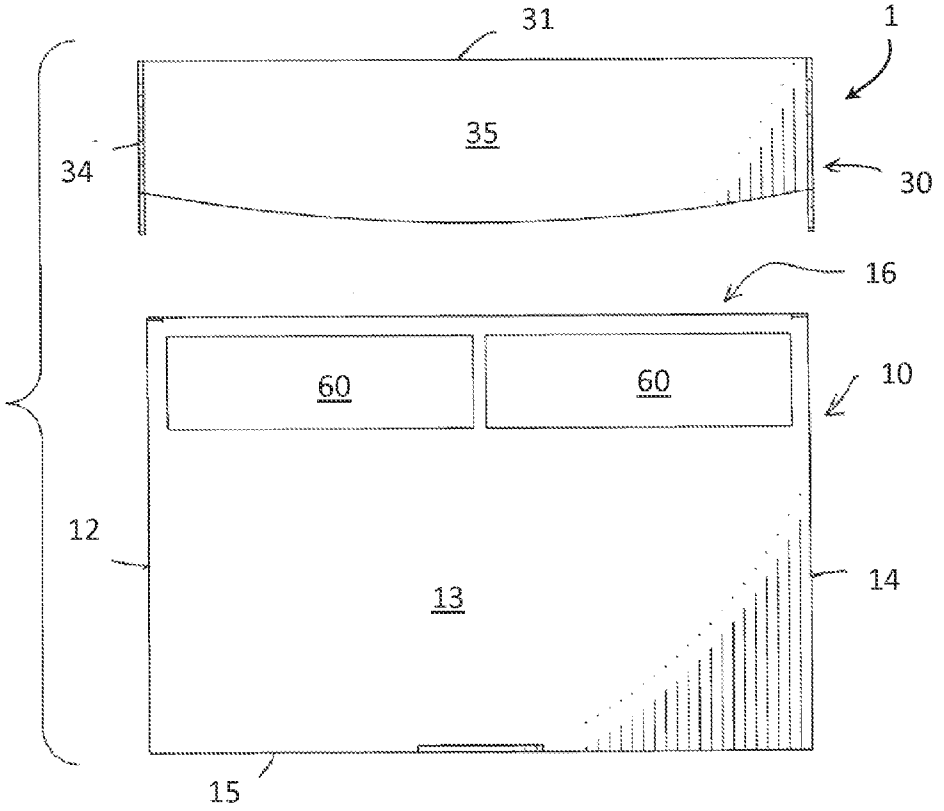


FIG. 5

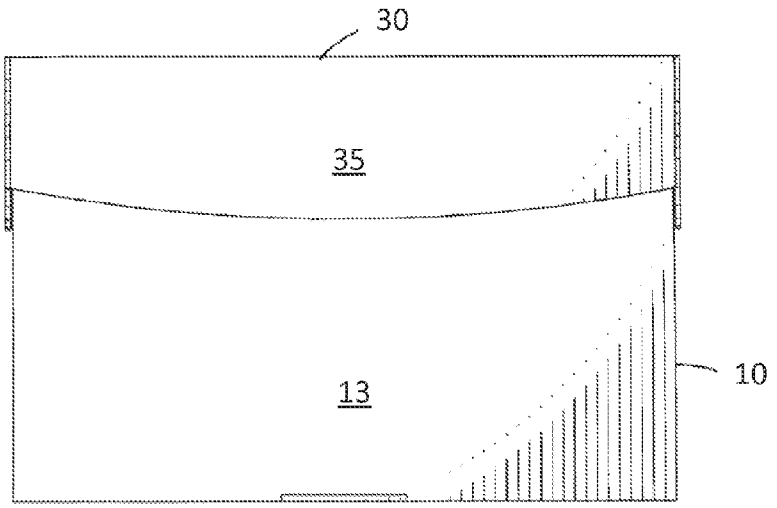


FIG. 6

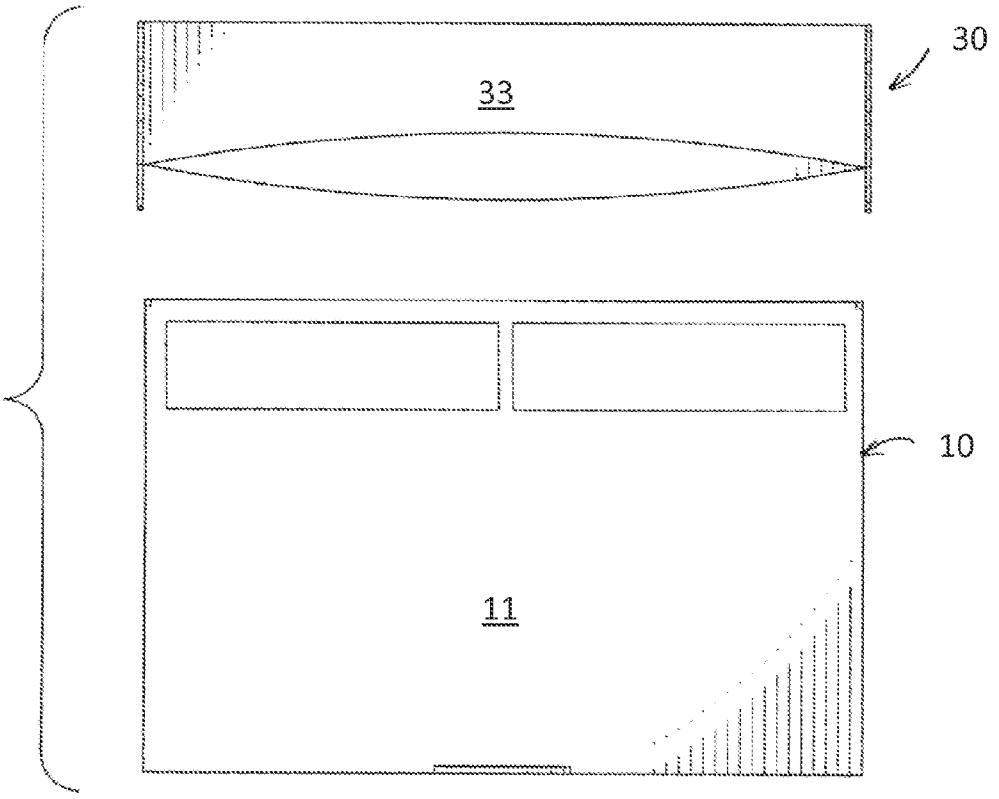


FIG. 7

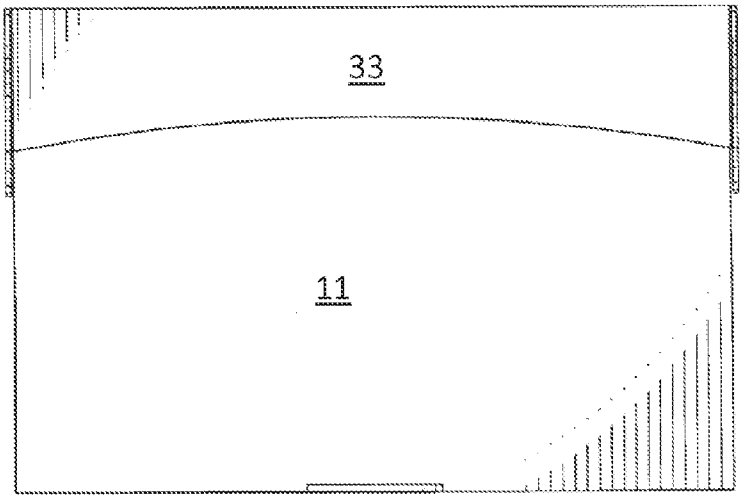


FIG. 8

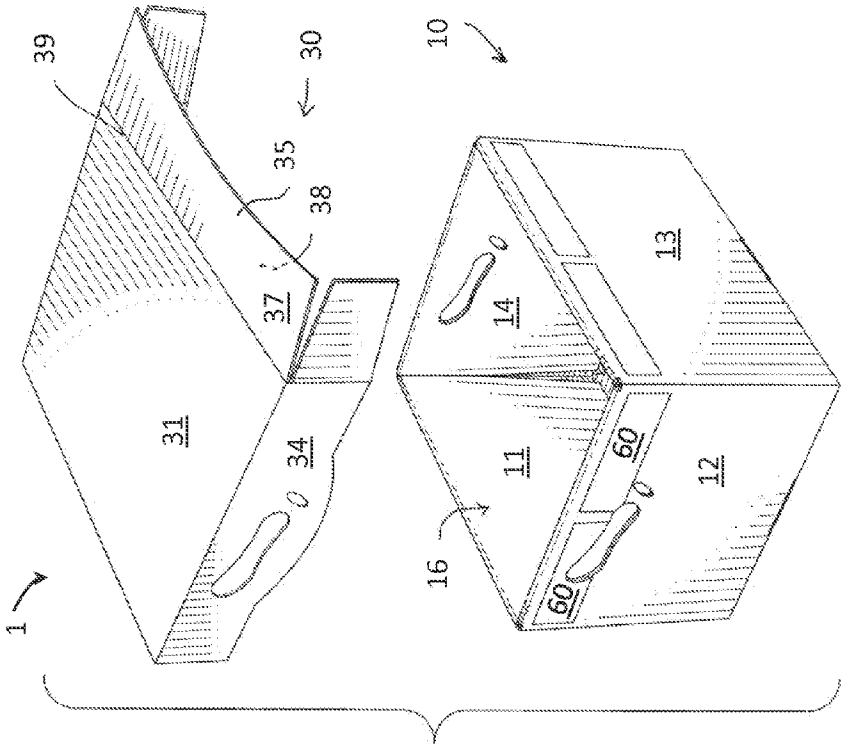


FIG. 11

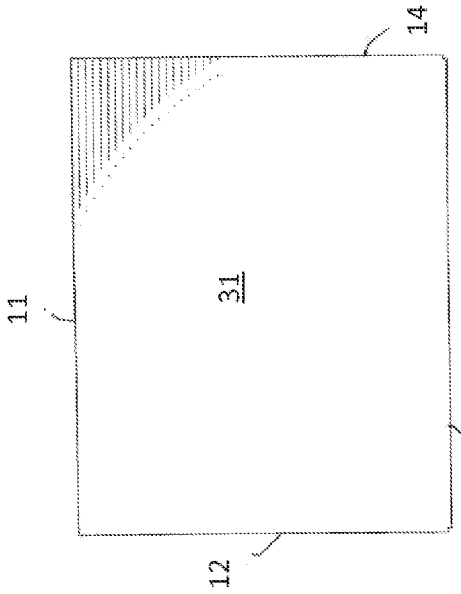


FIG. 9

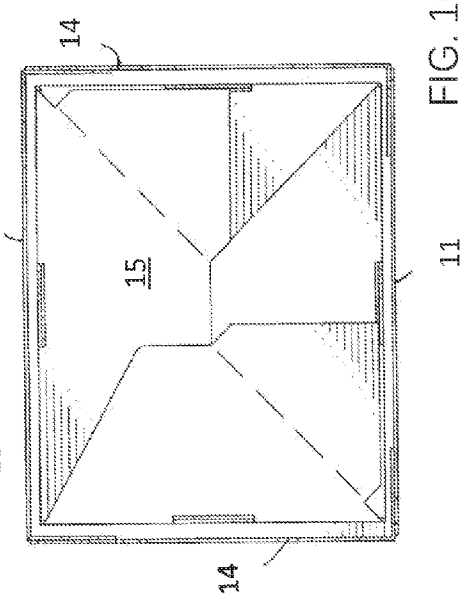


FIG. 10

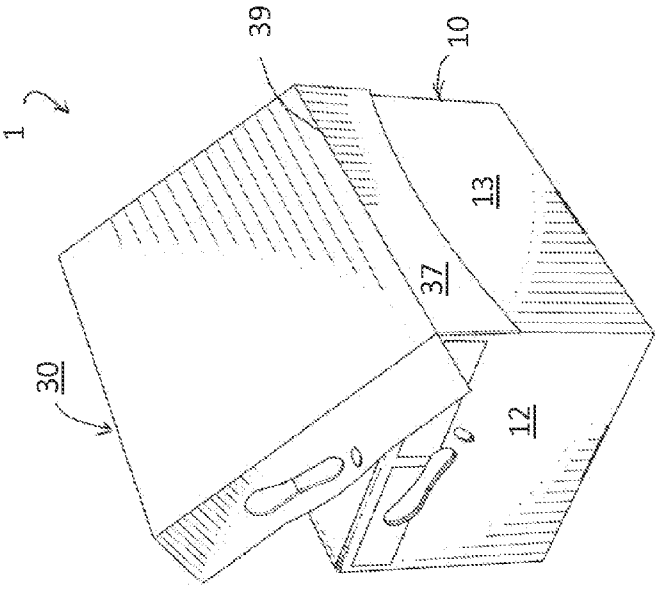


FIG. 13

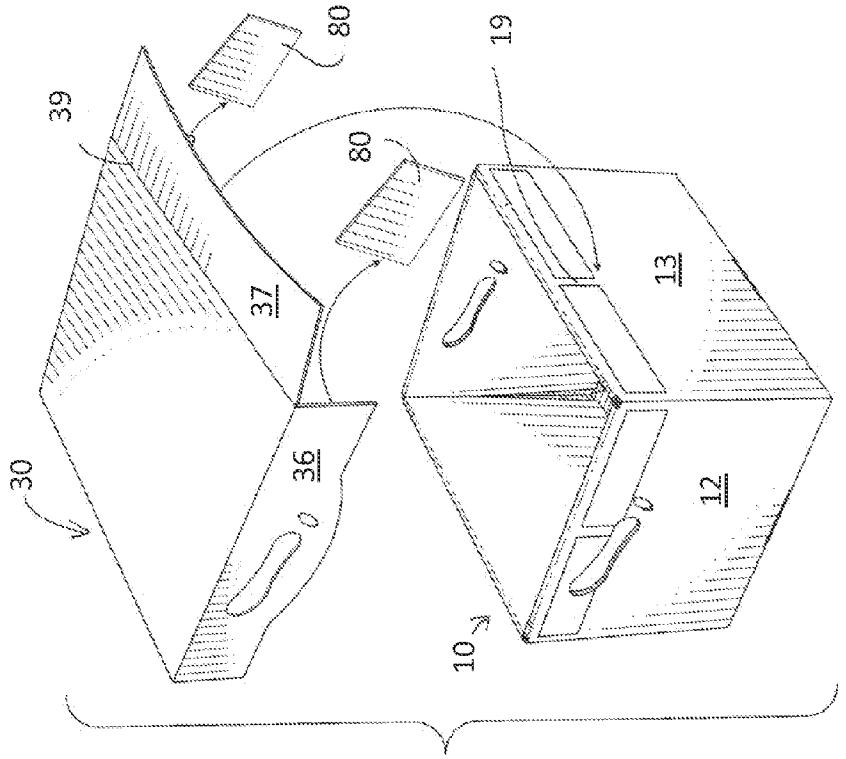


FIG. 12

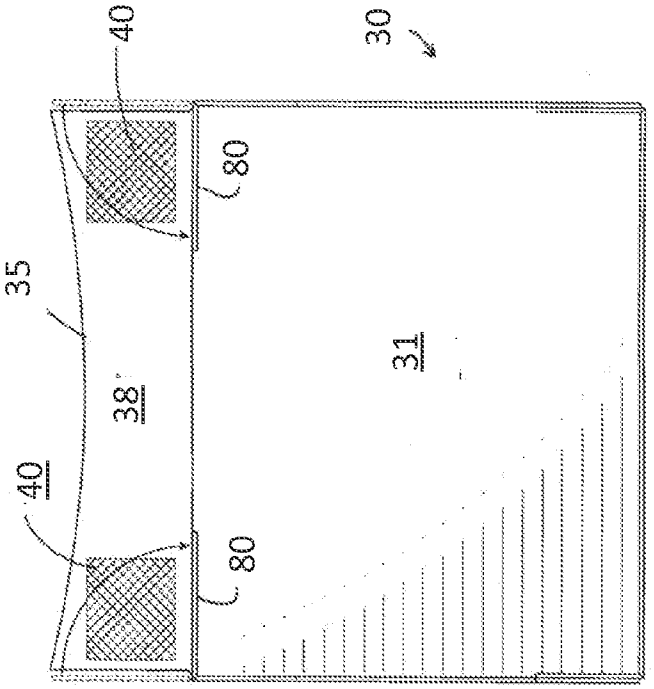


FIG. 15

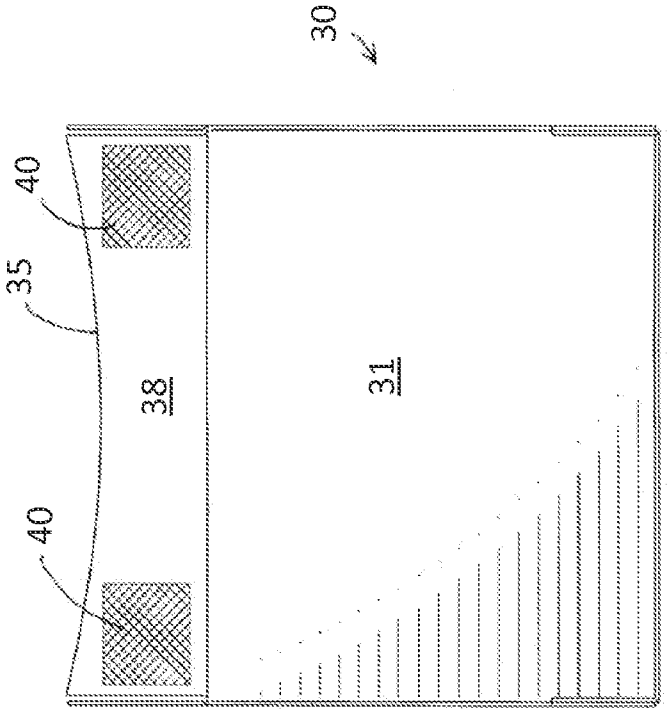


FIG. 14

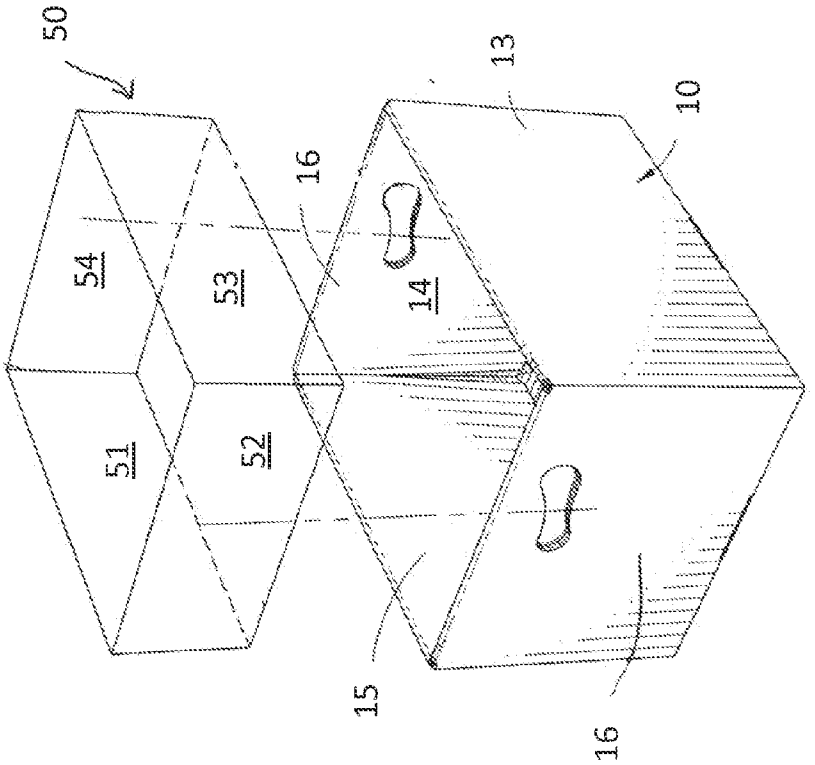


FIG. 17

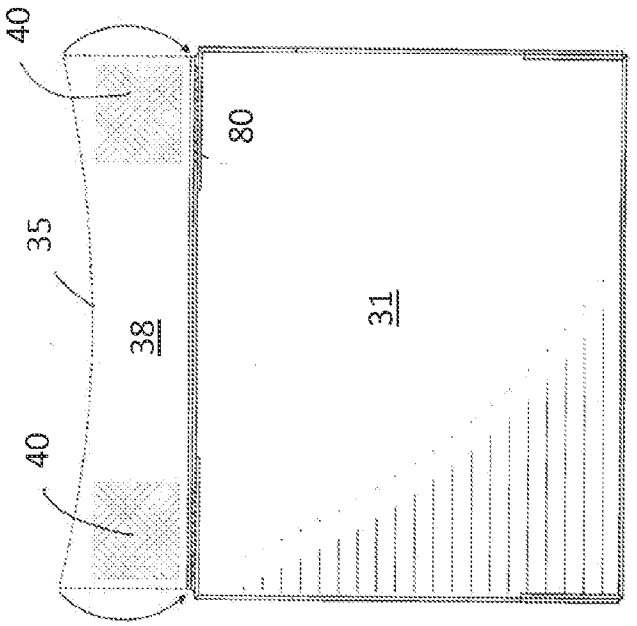


FIG. 16

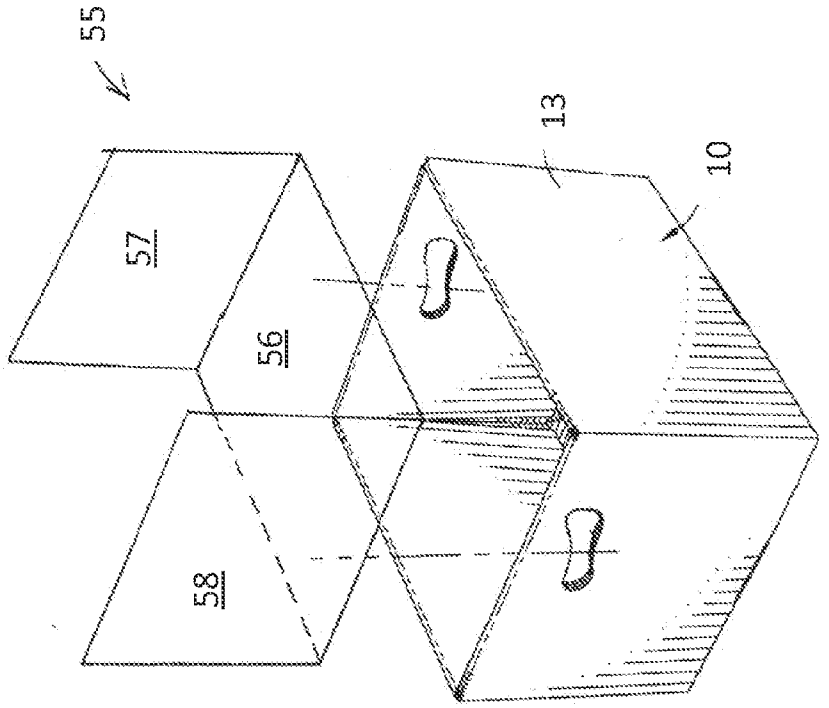


FIG. 19

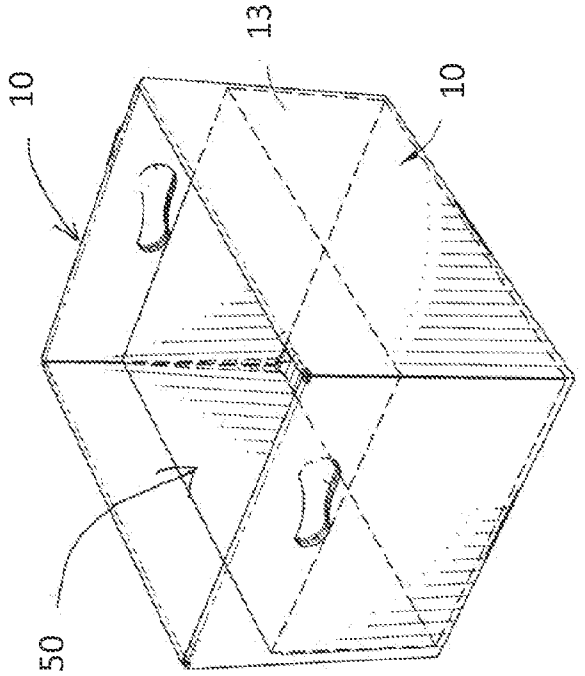


FIG. 18

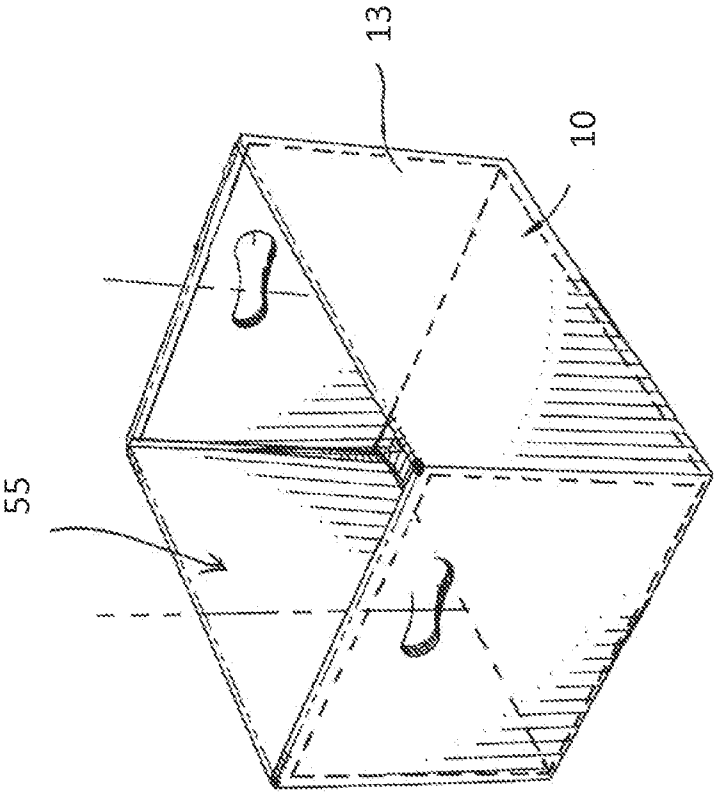


FIG. 20

CONTAINER BOX HAVING CONCEALED INFORMATION ZONES

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation of International Application No. PCT/US2012/036980, filed May 8, 2012 (pending), which claims the benefit of U.S. provisional application 61/483,730, filed May 8, 2011, the disclosures of which are incorporated herein by reference in their entirety.

FIELD OF THE INVENTION

[0002] The invention relates to containers, typically corrugated cardboard boxes.

BACKGROUND OF THE INVENTION

[0003] Homes and businesses alike require the lifting and carrying of items therethrough. Often these items, e.g., laundry baskets, trash cans, industrial containers, industrial parts, and the like, are carried multiple times to multiple locales within and without a home, office or industrial structure. Many times, items to be carried are created with little thought given to their ergonomic impact on the human form. Their design, therefore, can lend itself to pain, discomfort or injury to a human that carries the item.

[0004] Many businesses across many industries use containers to store documents, materials and the like. A common container for such use is a corrugated file box. Such file boxes are used in the hundreds of millions to hold and store any and all sorts of items that can fit within them. Typically, these boxes carry up to forty pounds or more of materials within them. When a human holds one of these weight loaded boxes (e.g., having forty pounds or more therein), multiple physical stresses ensure. In particular, stress to the lower and back shoulders and arms occur, such stress leading to significant injury over time.

[0005] When a person holds a heavy box, e.g., thirty pounds or more, either by handles embedded within the box or by its sides or bottom, and that person has a weak lower back, say from a previous back surgery, such holding can cause immeasurable pain and potential new injury.

[0006] In such previously known boxes the standard, slit handles found in the boxes therein have not changed for fifty or more years. In corrugated boxes, in particular, that box and its handles, if any, have seen no change or improvement since the introduction of that style of box over seventy years ago.

[0007] There remains a need to provide improvements in corrugated file boxes.

SUMMARY OF THE INVENTION

[0008] The present invention provides a two-piece box convertible into a one-piece box, comprising (a) a main box body including four connected side panels, which include a first side panel, and a bottom panel connected to the bottoms of the four connected side panels, and having an opening defined by the top edges of four connected side panels; (b) a lid including a top surface having four edges including a first edge, a skirt including four panels, including a first panel having an inner surface and an outer surface, extending downwardly from the four edges of the lid, and a conversion mechanism attached to the first panel, the first panel including a hinge portion positioned along the first edge of the lid, the lid being pivotable at the hinge; and at least one attachable portion positioned onto inner surface of the first panel, the attachable portion being fixable to a top portion of the first side panel of the box, wherein when the attachable portion on the inner surface of the first panel is fixed to the top portion of the first side panel of the box, the box converts from a two-piece box to a one-piece box.

[0009] The present invention more particularly provides a two-piece box convertible into a one-piece box, comprising: a. a main box body having, i. a first panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge; ii. a second panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said second panel being attached to said first panel along first connecting edge of said second panel and said second connecting edge of said first panel; iii. a third panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said third panel being attached to said second panel along said first connecting edge of said third panel and said second connecting edge of said second panel; iv. a fourth panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said fourth panel being attached to said third panel along said first connecting edge of said fourth panel and said second connecting edge of said third panel, and connected to said first panel along said second connecting edge of said fourth panel and said first connecting edge of said first panel; v. a bottom panel of at least one panel connected to said bottom edges of said first panel, said second panel, said third panel and said fourth panel; and vi. an opening formed from said top edges of said first panel, said second panel, said third panel and said fourth panel of said box; b. a lid having, i. a top surface being bounded by a first edge, a second edge, a third edge and a fourth edge, said first edge being connected at a point to said second edge, said second edge being connected at a point to said third edge, said third edge being connected at a point to said fourth edge, said fourth edge being connected at a point to said first edge; ii. a skirt, said skirt being connected to said lid about said first edge, said second edge, said third edge and said fourth edge and extending downwardly from said top surface of said lid from said first edge, said second edge, said third edge and said fourth edge, said skirt having a first panel connected to said first edge, a second panel connected to said second edge, a third panel connected to said third edge and a fourth panel connected to said fourth edge; iii. a conversion mechanism attached to said third panel on said skirt of said lid, said third panel having, 1. a first surface; 2. a second surface positioned oppositely to said first surface; 3. a hinge portion positioned along said third edge of said lid, said lid being pivot able about said hinge; and 4. at least one attachable portion positioned onto said second surface of said third panel, said attachable portion being fixable to said top portion of said third panel of said box, wherein when said attachable portion on said second surface of said third panel is fixed to said top portion of said third panel of said box, said box converts from a two-piece box to a one-piece box.

[0010] The present invention also provides a double-walled, two-piece box convertible into a one-piece box, comprising (a) a main box body made substantially from a corru-

gated material, comprising four connected side panels, which include a first side panel, and a bottom panel connected to the bottoms of the four connected side panels, and having an opening defined by the top edges of four connected side panels, wherein the four connected side panels and the bottom panel comprise two layers of the corrugated material; (b) a lid made substantially from the corrugated material, including a top surface having four edges including a first edge, a skirt including four panels, including a first panel having an inner surface and an outer surface, extending downwardly from the four edges of the lid, and a conversion mechanism attached to the first panel, the first panel including a hinge portion positioned along the first edge of the lid, the lid being pivotable at the hinge; and at least one attachable portion positioned onto inner surface of the first panel, the attachable portion being fixable to a top portion of the first panel of the box, wherein when the attachable portion on the inner surface of the first panel is fixed to a top portion of the first side panel of the box, said box converts from a two-piece box to a one-piece box.

[0011] The present invention more particularly provides a double-walled, two-piece box convertible into a one-piece box, comprising: a. a main box body made substantially from a corrugated material having, i. a first panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said first panel having two layers of corrugate material; ii. a second panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said second panel being attached to said first panel along first connecting edge of said second panel and said second connecting edge of said first panel, said second panel having two layers of corrugate material; iii. a third panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said third panel being attached to said second panel along said first connecting edge of said third panel and said second connecting edge of said second panel, said third panel having two layers of corrugate material; iv. a fourth panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said fourth panel being attached to said third panel along said first connecting edge of said fourth panel and said second connecting edge of said third panel, and connected to said first panel along said second connecting edge of said fourth panel and said first connecting edge of said first panel, said fourth panel having two layers of corrugate material; v. a bottom panel of at least one panel connected to said bottom edges of said first panel, said second panel, said third panel and said fourth panel, said bottom panel having substantially two layers of corrugate material; and vi. an opening formed from said top edges of said first panel, said second panel, said third panel and said fourth panel of said box; b. a lid made substantially from corrugate material having, i. a top surface being bounded by a first edge, a second edge, a third edge and a fourth edge, said first edge being connected at a point to said second edge, said second edge being connected at a point to said third edge, said third edge being connected at a point to said fourth edge, said fourth edge being connected at a point to said first edge; ii. a skirt, said skirt being connected to said lid about said first edge, said second edge, said third edge and said fourth edge and extending downwardly from said top surface of said lid from said first edge, said second edge, said third edge and said fourth edge, said skirt having a first panel connected to said first edge, a second panel connected to said second edge, a third panel connected to said third edge and a fourth panel connected to said fourth edge. iii. a conversion mechanism attached to said third panel on said skirt of said lid, said third panel having, 1. a first surface; 2. a second surface positioned oppositely to said first surface; 3. a hinge portion positioned along said third edge of said lid, said lid being pivot able about said hinge; and 4. at least one attachable portion positioned onto said second surface of said third panel, said attachable portion being fixable to said top portion of said third panel of said box, wherein when said attachable portion on said second surface of said third panel is fixed to said top portion of said third panel of said box, said box converts from a two-piece box to a one-piece box.

[0012] The present invention also provides a one-piece box, comprising (a) a main box body including four connected side panels, which includes a first side panel having a top portion, and a bottom panel connected to the bottoms of the four connected side panels, and having an opening defined by the top edges of four connected side panels; (b) a lid including a top surface having four edges including a first edge, a skirt including four panels, including a first panel having an inner surface and an outer surface, extending downwardly from the four edges of the lid, and a conversion mechanism attached to the first panel, the first panel including a hinge portion positioned along the first edge of the lid, the lid being pivotable at the hinge, and the first panel of the skirt fixed to the top portion of the first side panel of the main box body to provide the one-piece box.

[0013] The present invention more particularly provides a double walled, one-piece corrugated box including an integrated lid, comprising: a. a main box body made substantially from a corrugated material having, i. a first panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said first panel having two layers of corrugate material; ii. a second panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said second panel being attached to said first panel along first connecting edge of said second panel and said second connecting edge of said first panel, said second panel having two layers of corrugate material; iii. a third panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said third panel being attached to said second panel along said first connecting edge of said third panel and said second connecting edge of said second panel, said third panel having two layers of corrugate material; iv. a fourth panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said fourth panel being attached to said third panel along said first connecting edge of said fourth panel and said second connecting edge of said third panel, and connected to said first panel along said second connecting edge of said fourth panel and said first connecting edge of said first panel, said fourth panel having two layers of corrugate material; v. a bottom panel of at least one panel connected to said bottom edges of said first

panel, said second panel, said third panel and said fourth panel, said bottom panel having substantially two layers of corrugate material; and vi. an opening formed from said top edges of said first panel, said second panel, said third panel and said fourth panel of said box; b. a lid made substantially from corrugate material having, i. a top surface being bounded by a first edge, a second edge, a third edge and a fourth edge, said first edge being connected at a point to said second edge, said second edge being connected at a point to said third edge, said third edge being connected at a point to said fourth edge, said fourth edge being connected at a point to said first edge; ii. a skirt, said skirt being connected to said lid about said first edge, said second edge, said third edge and said fourth edge and extending downwardly from said top surface of said lid from said first edge, said second edge, said third edge and said fourth edge, said skirt having a first panel connected to said first edge, a second panel connected to said second edge, a third panel connected to said third edge and a fourth panel connected to said fourth edge, and wherein one of the panels of the skirt of the lid is fixed to a top portion of the corresponding panel of the main box body to provide the integrated lid.

[0014] The present invention also provides a triple-walled, two-piece box convertible into a one-piece box, comprising (a) a main box body made substantially from a corrugated material, comprising four connected side panels, which include a first side panel, and a bottom panel connected to the bottoms of the four connected side panels, and having an opening defined by the top edges of four connected side panels, wherein the four connected side panels comprise two layers of a corrugated material and have an external surface and an internal surface, and the bottom panel comprises two layers of the corrugated material; (b) a lid made substantially from the corrugated material, including a top surface having four edges including a first edge, a skirt including four panels, including a first panel having an inner surface and an outer surface, extending downwardly from the four edges of the lid, and a conversion mechanism attached to the first panel, the first panel including a hinge portion positioned along the first edge of the lid, the lid being pivotable at the hinge; and at least one attachable portion positioned onto inner surface of the first panel, the attachable portion being fixable to a top portion of the first panel of the box, wherein when the attachable portion on the inner surface of the first panel is fixed to a top portion of the first side panel of the box, said box converts from a two-piece box to a one-piece box; and (c) a corrugated, strengthening insert, including four connected insert panels, each insert panel connected to adjacent insert panels at side edges, the corrugated strengthening insert being positioned within the main box body wherein the four connected insert panels are adjacent to the internal surfaces of four connected side panels of the main box body, wherein the main box body and the corrugated, strengthening insert cooperate to provide a triple-walled, one-piece box.

[0015] The present invention more particularly provides a triple-walled, two-piece box convertible into a one-piece box, comprising: a. a main box body made substantially from a corrugated material having, i. a first panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said first panel having an external surface and an internal surface positioned oppositely to said internal surface and said first panel having two layers of corrugate material; ii. a second panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said second panel being attached to said first panel along first connecting edge of said second panel and said second connecting edge of said first panel, said second panel having an external surface and an internal surface positioned oppositely to said internal surface and said second panel having two layers of corrugate material; iii. a third panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said third panel being attached to said second panel along said first connecting edge of said third panel and said second connecting edge of said second panel, said third panel having an external surface and an internal surface positioned oppositely to said internal surface and said third panel having two layers of corrugate material; iv. a fourth panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said fourth panel being attached to said third panel along said first connecting edge of said fourth panel and said second connecting edge of said third panel, and connected to said first panel along said second connecting edge of said fourth panel and said first connecting edge of said first panel, said fourth panel having an external surface and an internal surface positioned oppositely to said internal surface and said fourth panel having two layers of corrugate material; v. a bottom panel of at least one panel connected to said bottom edges of said first panel, said second panel, said third panel and said fourth panel, said bottom panel having substantially two layers of corrugate material; and vi. an opening formed from said top edges of said first panel, said second panel, said third panel and said fourth panel of said box; b. A lid made substantially from corrugate material having, i. a top surface being bounded by a first edge, a second edge, a third edge and a fourth edge, said first edge being connected at a point to said second edge, said second edge being connected at a point to said third edge, said third edge being connected at a point to said fourth edge, said fourth edge being connected at a point to said first edge; ii. a skirt, said skirt being connected to said lid about said first edge, said second edge, said third edge and said fourth edge and extending downwardly from said top surface of said lid from said first edge, said second edge, said third edge and said fourth edge, said skirt having a first panel connected to said first edge, a second panel connected to said second edge, a third panel connected to said third edge and a fourth panel connected to said fourth edge, iii. a conversion mechanism attached to said third panel on said skirt of said lid, said third panel having, 1. a first surface; 2. a second surface positioned oppositely to said first surface; 3. a hinge portion positioned along said third edge of said lid, said lid being pivotable about said hinge; and 4. at least one attachable portion positioned onto said second surface of said third panel, said attachable portion being fixable to said top portion of said third panel of said box, wherein when said attachable portion on said second surface of said third panel is fixed to said top portion of said third panel of said box, said box converts from a twopiece box to a one-piece box; and c. a corrugated, strengthening insert having, i. a first surface, said first surface having a front side and a back side positioned oppositely to said front side; ii. a second surface connected along a first line of connection to said first surface, said second surface having a front side and a back

side positioned oppositely to said front side; iii. a third surface connected along a second line of connection to said second surface, said third surface having a front side and a back side positioned oppositely to said front side; iv. a fourth surface connected along a third line of connection to said third surface and connected along a fourth line of connection to said first surface, said fourth surface having a front side and a back side positioned oppositely to said front side, wherein said corrugated strengthening insert is positioned within said main box body, and said first surface of said strengthening insert is held adjacent to said internal surface of said first panel of said main box body, said second surface of said strengthening insert is held adjacent to said internal surface of said second panel of said main box body, said third surface of said strengthening insert is held adjacent to said internal surface of said third panel of said main box body, and said fourth surface of said strengthening insert is held adjacent to said internal surface of said fourth panel of said main box body, said main box body and said corrugated, strengthening insert operating to create a one-piece, triple walled, corrugated four walled box.

[0016] The present invention also provides a triple-walled, one-piece box, comprising (a) a main box body made substantially from a corrugated material, comprising four connected side panels, which include a first side panel, and a bottom panel connected to the bottoms of the four connected side panels, and having an opening defined by the top edges of four connected side panels, wherein the four connected side panels comprise two layers of a corrugated material and have an external surface and an internal surface, and the bottom panel comprises two layers of the corrugated material; (b) a lid including a top surface having four edges including a first edge, a skirt including four panels, including a first panel having an inner surface and an outer surface, extending downwardly from the four edges of the lid, and a conversion mechanism attached to the first panel, the first panel including a hinge portion positioned along the first edge of the lid, the lid being pivotable at the hinge, and the first panel of the skirt fixed to the top portion of the first side panel of the main box body to provide the one-piece box; and (c) a corrugated, strengthening insert, including four connected insert panels, each insert panel connected to adjacent insert panels at side edges, the corrugated strengthening insert being positioned within the main box body wherein the four connected insert panels are adjacent to the internal surfaces of four connected side panels of the main box body, wherein the main box body and the corrugated, strengthening insert cooperate to provide a triple-walled, one-piece box.

[0017] The present invention more particularly provides a triple-walled, one-piece box, comprising: a. a main box body made substantially from a corrugated material having, i. a first panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said first panel having an external surface and an internal surface positioned oppositely to said internal surface and said first panel having two layers of corrugate material; ii. a second panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said second panel being attached to said first panel along first connecting edge of said second panel and said second connecting edge of said first panel, said second panel having an external surface and an internal surface positioned oppositely to said internal surface and said second panel having two layers of corrugate material; iii. a third panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said third panel being attached to said second panel along said first connecting edge of said third panel and said second connecting edge of said second panel, said third panel having an external surface and an internal surface positioned oppositely to said internal surface and said third panel having two layers of corrugate material; iv. a fourth panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said fourth panel being attached to said third panel along said first connecting edge of said fourth panel and said second connecting edge of said third panel, and connected to said first panel along said second connecting edge of said fourth panel and said first connecting edge of said first panel, said fourth panel having an external surface and an internal surface positioned oppositely to said internal surface and said fourth panel having two layers of corrugate material; v. a bottom panel of at least one panel connected to said bottom edges of said first panel, said second panel, said third panel and said fourth panel, said bottom panel having substantially two layers of corrugate material; and vi. an opening formed from said top edges of said first panel, said second panel, said third panel and said fourth panel of said box; b. a lid made substantially from corrugate material having, i. a top surface being bounded by a first edge, a second edge, a third edge and a fourth edge, said first edge being connected at a point to said second edge, said second edge being connected at a point to said third edge, said third edge being connected at a point to said fourth edge, said fourth edge being connected at a point to said first edge; ii. a skirt, said skirt being connected to said lid about said first edge, said second edge, said third edge and said fourth edge and extending downwardly from said top surface of said lid from said first edge, said second edge, and said third edge, said skirt having a first panel connected to said first edge, a second panel connected to said second edge, and a third panel connected to said third edge, said lid being an integrated part of said main box body whereby said lid is connected to said main box body at said top edge of said fourth panel of said main box body; and c. a corrugated, strengthening insert having, i. a first surface, said first surface having a front side and a back side positioned oppositely to said front side; ii. a second surface connected along a first line of connection to said first surface, said second surface having a front side and a back side positioned oppositely to said front side; iii. a third surface connected along a second line of connection to said second surface, said third surface having a front side and a back side positioned oppositely to said front side; iv. a fourth surface connected along a third line of connection to said third surface and connected along a fourth line of connection to said first surface, said fourth surface having a front side and a back side positioned oppositely to said front side, wherein said corrugated strengthening insert is positioned within said main box body, and said first surface of said strengthening insert is held adjacent to said internal surface of said first panel of said main box body, said second surface of said strengthening insert is held adjacent to said internal surface of said second panel of said main box body, said third surface of said strengthening insert is held adjacent to said internal surface of said third panel of said main box body, and said fourth surface of said strengthening insert is held adjacent to

said internal surface of said fourth panel of said main box body, said main box body and said corrugated, strengthening insert operating to create a one-piece, triple walled, corrugated four walled box.

[0018] The present invention also provides a box with concealable zones for information, comprising (a) a main box body including four connected side panels, and a bottom panel connected to the bottoms of the four connected side panels, including a first side panel, and having an opening defined by the top edges of four connected side panels; (b) one or more information zones positioned substantially adjacent to a top edge of at least the first side panel of the main box, the one or more information zones configured to receive readable information thereon; and (c) a lid including a top surface having four edges including a first edge, a skirt including four panels, including a first panel, extending downwardly from the four edges of the lid, wherein when the lid covers the opening of the main box body, the first panel of the skirt substantially covers the one or more information zones of the first side panel.

[0019] A box with concealable zones for information, comprising: a. a main box body having, i. a first panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge; ii. a second panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said second panel being attached to said first panel along first connecting edge of said second panel and said second connecting edge of said first panel; iii. a third panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said third panel being attached to said second panel along said first connecting edge of said third panel and said second connecting edge of said second panel; iv. a fourth panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said fourth panel being attached to said third panel along said first connecting edge of said fourth panel and said second connecting edge of said third panel, and connected to said first panel along said second connecting edge of said fourth panel and said first connecting edge of said first panel; v. a bottom panel of at least one panel connected to said bottom edges of said first panel, said second panel, said third panel and said fourth panel; and vi. an opening formed from said top edges of said first panel, said second panel, said third panel and said fourth panel of said box; b. one or more zones of information positioned substantially adjacent to said top edge of at least said first panel of said main box, said one or more zones of information configured to receive readable information thereon; c. a lid having, i. a top surface being bounded by a first edge, a second edge, a third edge and a fourth edge, said first edge being connected at a point to said second edge, said second edge being connected at a point to said third edge, said third edge being connected at a point to said fourth edge, said fourth edge being connected at a point to said first edge; and ii. a skirt, said skirt being connected to said lid about said first edge, said second edge, said third edge and said fourth edge and extending downwardly from said top surface of said lid from said first edge, said second edge, said third edge and said fourth edge, said skirt having a first panel connected to said first edge, a second panel connected to said second edge, a third panel connected to said third edge and a fourth panel connected to said fourth edge, said first panel of said skirt substantially covering said one or more zones of information on said first panel of said main box.

[0020] Accordingly, the invention provides a two-piece box having a main box body and a separate lid for fitting thereon that is convertible into a one-piece box whereby the lid is permanently attachable to the main box body.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021] While the specification concludes with claims particularly pointing out and distinctly claiming the invention, it is believed that the embodiments set forth herein will be better understood from the following description in conjunction with the accompanying figures, in which like reference numerals identify like elements and in which:

[0022] FIG. **1** is a perspective view of a preferred container herein showing its lid raised from its body.

[0023] FIG. **2** is a perspective view of FIG. **1** in which the lid sits properly upon the body of the container.

[0024] FIG. **3** is a side view of FIG. **1**.

[0025] FIG. **4** is a side view of FIG. **2**.

[0026] FIG. **5** is a front view of the container showing the lid raised from its body.

[0027] FIG. **6** is a front view of FIG. **5** in which the lid is secured to the body of the container.

[0028] FIG. **7** is a rear view of the container showing the lid raised from its body.

[0029] FIG. **8** is a rear view of FIG. **7** in which the lid is secured to the body of the container.

[0030] FIG. **9** provides a top view of the container of FIG. **1**.

[0031] FIG. **10** provides a bottom view of the container of FIG. **1**.

[0032] FIG. **11** provides a perspective view of a novel lid embodiment and container body.

[0033] FIG. **12** provides a perspective view of the novel lid embodiment and container of FIG. **11** showing the removal of a portion of the lid.

[0034] FIG. **13** provides a perspective view of the now attached novel lid embodiment to the container body.

[0035] FIG. **14** provides a top view of a novel lid embodiment.

[0036] FIG. **15** provides a top view of the novel lid embodiment of FIG. **14** being converted.

[0037] FIG. **16** provides a top view of the novel lid embodiment of FIG. **15** being fully converted into a usable lid.

[0038] FIG. **17** provides a perspective view of a strengthening insert for use in a container herein.

[0039] FIG. **18** provides a perspective view of the strengthening insert of FIG. **17** placed within the container shown.

[0040] FIG. **19** provides a perspective view of an alternative embodiment of the strengthening insert for use in a container herein.

[0041] FIG. **20** provides a perspective view of the strengthening insert of FIG. **19** placed within the container shown.

DETAILED DESCRIPTION OF THE INVENTION

[0042] The container box **1** of the present invention having an attachable lid is shown in FIGS. **1**-**15**. The main box body **10** has five sides, i.e., four walls and a base layer that makes up the floor of the box. The main box body **10** comprises a first

side panel **11** having a top edge, a bottom edge positioned oppositely to the top edge, a first connecting edge and a second connecting edge positioned oppositely to the first connecting edge. The box also has a second side panel **12** having a top edge, a bottom edge positioned oppositely to the top edge, a first connecting edge and a second connecting edge positioned oppositely to the first connecting edge. The second side panel **12** is attached to the first side panel **11** along the first connecting edge of the second panel and the second connecting edge of the first panel. The main box body **10** further comprises a third side panel **13** having a top edge, a bottom edge positioned oppositely to the top edge, a first connecting edge and a second connecting edge positioned oppositely to the first connecting edge. The third side panel **13** is attached to the second side panel **12** along the first connecting edge of the third side panel **13** and the second connecting edge of the second side panel **12**. The main box body also comprises a fourth side panel **14** having a top edge, a bottom edge positioned oppositely to the top edge, a first connecting edge and a second connecting edge positioned oppositely to the first connecting edge. The fourth side panel **14** is attached to the third side panel **13** along the first connecting edge of the fourth side panel **14** and the second connecting edge of the third side panel **13**. Also, the fourth side panel **14** is connected to the first side panel **11** along the second connecting edge of the fourth side panel and the first connecting edge of the first side panel.

[0043] The main body box also includes a pair of grip openings **5** in opposite side panels **12** and **14**, for inserting a user's fingers for lifting and carrying the box.

[0044] Also attached to the main body **10** of the box is a bottom panel **15** of at least one panel or layer. The bottom panel **15** is connected to the bottom edges of the first side panel **11**, the second side panel **12**, the third side panel **13** and the fourth side panel **14**. By such construction, an opening is formed by the top edges of the first panel, the second panel, the third panel and the fourth panel of the main box body.

[0045] Also provided is a lid **30** that is configured to cover the opening **16** of the main box body. The lid comprises a top surface **31** bounded by a first edge, a second edge, a third edge and a fourth edge. The first edge is connected at a point to the second edge. The second edge is connected at a point to the third edge. The third edge is connected at a point to the fourth edge. The fourth edge is connected at a point to the first edge. The lid also comprises a skirt **32** that is connected to the lid's top surface **31** about the lid's first edge, its second edge, its third edge and its fourth edge. The skirt **32** extends downwardly from the top surface **31** of the lid from the first edge, the second edge, the third edge and the fourth edge. The skirt **32** has a first panel **33** connected to the first edge, a second panel **34** connected to the second edge, a third panel **35** connected to the third edge and a fourth panel **36** connected to the fourth edge.

[0046] The lid **30** also includes a pair of grip openings **7** in opposite skirt panels **34** and **36**, that register with the grip openings **5** of the main box body when the lid **30** is placed over the to the top opening of the main box body **10**.

[0047] In one configuration herein, the lid is attachable and detachable to the main box body.

[0048] In another preferred embodiment herein, the lid is constructed to also become permanently attachable to the main box body via a lid conversion mechanism. A lid conversion mechanism is provided, associated with the lid **30**, illustrated as attached to the third panel **35** on the skirt of the lid. As shown in FIG. **11**, the third panel **35** has a first (outer) surface **37**, a second (inner) surface **38** positioned oppositely to the first surface, a hinge **39** positioned along the third edge of the lid. In practice, the lid **30** is pivotable about the hinge **39**. Also, at least one attachment means, illustrated as attachable portion **40** (FIG. **14**) is positioned onto the second surface **38** of the third skirt panel **35**. The attachable portion **40** is fixable to the top portion **19** of the third panel **13** of the main box body **10**. The attachable portion **40** on the second surface of the third skirt panel **35** is fixed to the top portion **19** of the third side panel **13** of the main box body. By such fixing, the box **1** converts from a two-piece box to a one-piece box.

[0049] The attachment means can be any adhesive material useful for bonding paper, plastic or corrugated materials, and can include pressure-sensitive adhesives, preferably covered with a release layer that is peeled away from the adhesive layer prior to fixing the lid to the side panel of the main box body. As shown in FIGS. **12**, **15** and **16**, portions **80** of the skirt panel can be removed or folded inward before fixing the skirt panel **35** to the side panel **13**.

[0050] Also provided herein is a double-walled, two-piece box convertible into a one-piece box, substantially as shown in FIGS. **11-16**. In particular, the double-walled, two-piece box **1** comprises a main box body **10** as described herein, made substantially from a corrugated material, whereby the first side panel **11**, second side panel **12**, third side panel **13** and fourth side panel **14** are double-walled having two layers of corrugate material.

[0051] The main box body **10** of the body further comprises a bottom panel **15** that has at least one layer of corrugate material, and preferably, substantially, two layers of corrugate material, connected to the bottom edges of the first side panel **11**, the second side panel **12**, the third side panel **13** and the fourth side panel **14** of the main box body.

[0052] Also provided herein is a double walled one-piece box with an integrated lid. The lid herein is made substantially from corrugate material. It has a top surface bounded by a first edge, a second edge, a third edge and a fourth edge. The first edge herein is connected at a point to the second edge. The second edge is connected at a point to the third edge. The third edge is connected at a point to the fourth edge, with the fourth edge being connected at a point to the first edge. As shown in FIG. **13**, the lid **30** is an integrated part of the main box body **10** at the top portion **19** of the third side panel **13** of the main box body.

[0053] The lid **30** also comprises a skirt **32** that is connected to the lid about its first edge, a second edge, a third edge and a fourth edge. The skirt extends downwardly from the top surface **31** of the lid from its first edge, its second edge, and its third edge. The skirt has a first panel connected to the lid's first edge, a second panel connected to the lid's second edge, and a third panel connected to the lid's third edge. One of the panels, panel **35**, of the skirt **32** is fixed to a top portion **19** of the corresponding side panel **13** of the main box body.

[0054] In another embodiment herein, as shown in FIGS. **17-18**, a triple-walled, two-piece box convertible into a one-piece box is provided. Herein, the box's main box body **10** is made substantially from a corrugated material having a first panel, a second panel, a third panel, a fourth panel and a bottom panel. Each of the foregoing panels is made of a double wall of corrugate material.

[0055] The triple-walled box herein is configured to receive a strengthening insert having a first insert panel **51**, a second insert panel **52**, a third insert panel **53** and a fourth insert panel

54. The first insert panel **51** has a front side and a back side positioned oppositely to the front side. The second insert panel **52** is connected along a first line of connection to the first insert panel **51**; the second insert panel **52** has a front side and a back side positioned oppositely to the front side. The third insert panel **53** is connected along a second line of connection to the second insert panel **52**; the third insert panel **53** has a front side and a back side positioned oppositely to the front side. The fourth insert panel **54** is connected along a third line of connection to the third insert panel **53** and connected along a fourth line of connection to the first insert panel **51**; the fourth insert panel **54** has a front side and a back side positioned oppositely to the front side.

[0056] In practice herein, the corrugated strengthening insert **50** is positioned within the main box body **10**, and said first insert panel **51** of said strengthening insert is held adjacent to said internal surface of said first side panel **11** of said main box body, the second insert panel **52** of said strengthening insert is held adjacent to said internal surface of the second side panel **12** of said main box body, the third insert panel **53** of said strengthening insert is held adjacent to said internal surface of said third side panel **13** of said main box body, and the fourth insert panel **54** of said strengthening insert is held adjacent to the internal surface of the fourth side panel **14** of said main box body, said main box body and said corrugated, strengthening insert **50** cooperating to create a one-piece, triple-walled, corrugated four-walled box.

[0057] An alternative embodiment of a box with a strengthening insert is shown in FIGS. **19** and **20**, wherein an insert **55** includes a base panel **56** and opposed side insert panels **57** and **58**, which can be configured on either the wider panel sides, as illustrated, or the longer panel sides, of the main box body **10**.

[0058] The height of the insert panels is typically at least 50%, such as is shown in FIGS. **17** and **18**, and up to substantially 100%, as shown in FIGS. **19** and **20**, of the height of the side panels **11**,**12**,**13**,**14** of the main box body **10**. The resistance of the side panels of the main box body to deformation and collapse, caused by stacking container boxes into columns of several boxes, increases with the relative height of the insert panels to the box side panels.

[0059] Preferably, the triple-walled box herein has a detachable/attachable lid that is permanently attachable to the main box body via a lid conversion mechanism as described herein.

[0060] Alternatively, the triple-walled box herein may have an integrated lid as described herein.

[0061] Another embodiment provided herein is a box **1** with concealable zones for information. Like similar embodiments herein, the box **1** comprises a main box body **10** with a first side panel **11**, a second side panel **12**, a third side panel **13**, a fourth side panel **14**, and a bottom panel **15**. One or more zones of information (information zones) **60** are positioned substantially adjacent to a top edge of one or more of the side panels (illustrated on side panel **12**), around the periphery of the main box body **10**. These one or more zones of information **60** are configured to receive readable information thereon. By readable it is meant herein readable by a human and/or machine readable (e.g., machine readable bar code). The zone may include perimeter, such as a printed rectangle, printed parallel lines, or both, or other indication of a zone where a user can record readable information. Recording can be accomplished by hand writing such as with a marking pen, or by applying stenciling or labels.

[0062] The one or more zones **60** of information may be present on any one, more or all of the side panels of the main box body. Specifically, one or more zones **60** of information may be provided on the first side panel, the second side panel, the third side panel and/or the fourth side panel. The zones of information are typically substantially or fully concealed by the lid **30** applied to the main box body to cover the opening **16**. More specifically, the skirt portion **32** of the lid covers substantially or fully each zone **60** of information provided for on the main box body **10**.

[0063] Alternatively, one or more zones **60** of information may be applied to the inner surface of the lid itself. Information applied to the lid becomes concealed when the lid is applied to the main box. One or more zones of information may be applied to both the main box body and the lid, or one or the other.

1.-**5**. (canceled)

6. A box with concealable zones for information, comprising:

a. a main box body having,
   i. a first panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge;
   ii. a second panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said second panel being attached to said first panel along first connecting edge of said second panel and said second connecting edge of said first panel;
   iii. a third panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said third panel being attached to said second panel along said first connecting edge of said third panel and said second connecting edge of said second panel;
   iv. a fourth panel having a top edge, a bottom edge positioned oppositely to said top edge, a first connecting edge and a second connecting edge positioned oppositely to said first connecting edge, said fourth panel being attached to said third panel along said first connecting edge of said fourth panel and said second connecting edge of said third panel, and connected to said first panel along said second connecting edge of said fourth panel and said first connecting edge of said first panel;
   v. a bottom panel of at least one panel connected to said bottom edges of said first panel, said second panel, said third panel and said fourth panel; and
   vi. an opening formed from said top edges of said first panel, said second panel, said third panel and said fourth panel of said box;

b. one or more zones of information positioned substantially adjacent to said top edge of said first panel of said main box, said one or more zones of information configured to receive readable information thereon;

c. a lid having,
   i. a top surface being bounded by a first edge, a second edge, a third edge and a fourth edge, said first edge being connected at a point to said second edge, said second edge being connected at a point to said third edge, said third edge being connected at a point to said

fourth edge, said fourth edge being connected at a point to said first edge; and

ii. a skirt, said skirt being connected to said lid about said first edge, said second edge, said third edge and said fourth edge and extending downwardly from said top surface of said lid from said first edge, said second edge, said third edge and said fourth edge, said skirt having a first panel connected to said first edge, a second panel connected to said second edge, a third panel connected to said third edge and a fourth panel connected to said fourth edge, said first panel of said skirt substantially covering said one or more zones of information on said first panel of said main box.

7. A container box comprising:

a) a box body comprising: (i) a pair of opposed end panels, each end panel a top edge, a bottom edge, a first side edge and a second side edge, (ii) a pair of opposed side panels, each disposed between the pair of opposed end panels, each side panel having a top edge, a bottom edge, a first end edge and a second end edge, wherein the first side edge of each of the pair of end panels is connected to the first side edge and second side edge, respectively, of the first side panel disposed there between, and the second side edge of each of the pair of end panels is connected to the first side edge and second side edge, respectively, of the second side panel disposed there between; (iii) a bottom panel connected to the bottom edges of at least one of the pair of opposed end panels and the pair of opposed side panels; wherein the top edges of the opposed end panels and the opposed side panels define an opening; and (iv) one or more information zones positioned on an outer surface, substantially adjacent to the top edge, of at least one panel of the pair of opposed end panels and the pair of opposed side panels, the one or more information zones configured to receive readable information thereon; and

b) a lid comprising a top surface configured to cover the opening of the box body, and a skirt connected to and extending downwardly from the top surface to substantially cover the one or more information zones on the at least one panel.

8. The container according to claim **7** wherein the one or more information zones are configured to receive machine readable information.

9. The container according to claim **7** wherein the one or more information zones have a visible perimeter marking.

10. The container according to claim **9** wherein the visible perimeter marking is selected from the group consisting of a printed rectangle, printed parallel lines, and a combination thereof.

11. The container according to claim **9** wherein the visible perimeter marking is an applied stencil or label.

12. The container according to claim **7** wherein the completely covers the one or more information zones.

13. The container according to claim **7** wherein a side edge of the lid is connected to a top edge of one of the pair of opposed side panels, to provide a hinged lid.

14. A container box comprising:

a) a box body comprising with a first side panel, a second side panel, a third side panel, a fourth side panel, and a bottom panel, each side panel having an upper portion and an upper edge, wherein the upper edges of the four side panels define a top opening;

b) a lid configured to cover the top opening of the box body, the lid including a skirt that extends downwardly from an edge of the lid to cover an upper portion of at least one of the first side panel, the second side panel, the third side panel, and the fourth side panel; and

c) an information zone disposed on a portion of the container box that is concealed when the lid covers the top opening of the box body.

15. The container according to claim **14** wherein the one or more information zones are configured to receive machine readable information.

16. The container according to claim **14** wherein the one or more information zones have a visible perimeter marking.

17. The container according to claim **16** wherein the visible perimeter marking is selected from the group consisting of a printed rectangle, printed parallel lines, and a combination thereof.

18. The container according to claim **16** wherein the visible perimeter marking is an applied stencil or label.

19. The container according to claim **14** wherein the completely covers the one or more information zones.

20. The container according to claim **14** wherein a side edge of the lid is connected to a top edge of one of the pair of opposed side panels, to provide a hinged lid.

21. The container according to claim **14** wherein the information zone is disposed on an upper portion of an outside surface of the box body that is concealed by the skirt of the lid.

22. The container according to claim **21** wherein an information zone is further disposed on an inner surface of the lid.

23. The container according to claim **14** wherein the information zone is disposed on an inner surface of the lid.

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