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Hsu(10) **Pub. No.: US 2009/0261111 A1**(43) **Pub. Date: Oct. 22, 2009**(54) **COLLAPSIBLE CONTAINER USEFUL AS A COOLER****Publication Classification**(51) **Int. Cl.***B65D 81/38* (2006.01)*B65D 25/14* (2006.01)*B65D 25/28* (2006.01)*B65D 6/16* (2006.01)(52) **U.S. Cl. 220/592.2; 220/495.06; 220/752; 220/666**(76) **Inventor: Junior J. Hsu, Northbrook, IL (US)**

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CHICAGO, IL 60606 (US)**(21) **Appl. No.: 12/315,047**(22) **Filed: Nov. 25, 2008****Related U.S. Application Data**(60) **Provisional application No. 61/124,557, filed on Apr. 17, 2008.**

(57)

ABSTRACT

A collapsible self-supporting container, useful as a cooler includes a lid, a base panel, a front wall, a rear wall and a pair of side walls together forming a collapsible box defining an interior chamber for receiving items to be stored and/or cooled, and a rigid rectangular frame below the lid and surrounding an opening for accessing the chamber. The body is selectably configurable between collapsed and expanded configurations. The front and rear walls are flexibly attached to both the frame and the base panel and have separate top and bottom panels flexibly joined together. The side walls are flexibly attached to the frame and are engageable with the base panel. An optional collapsible liner is insertable within the container body.

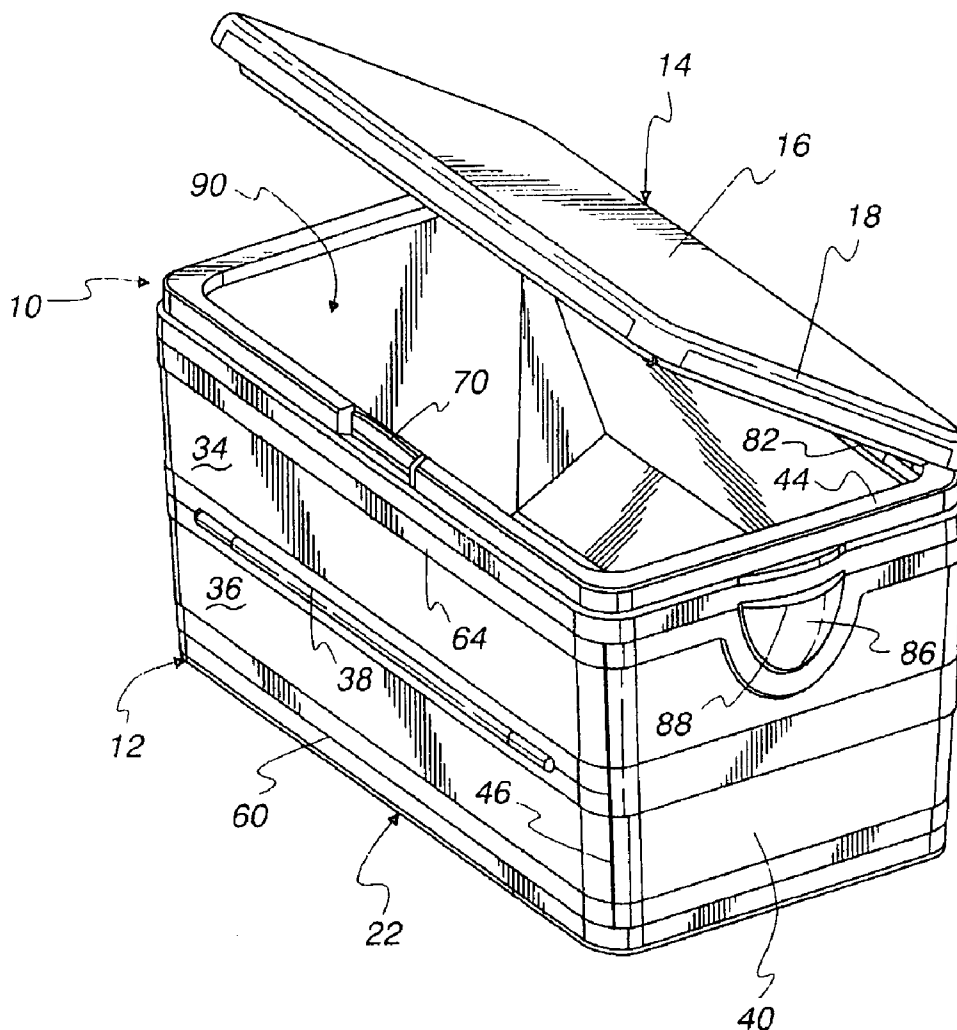


Fig. 1

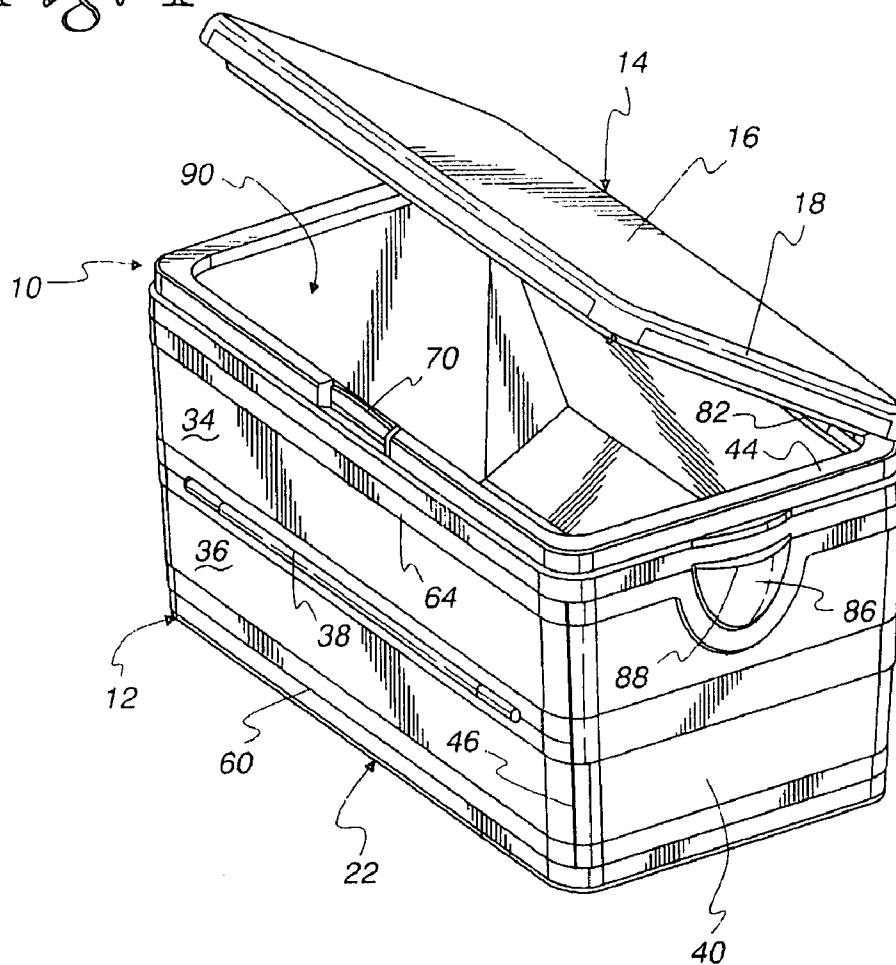


Fig. 2

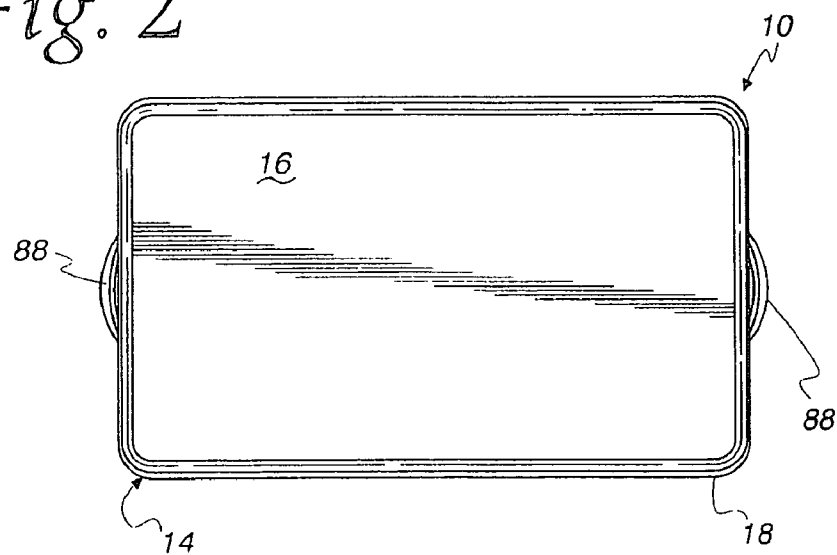


Fig. 3

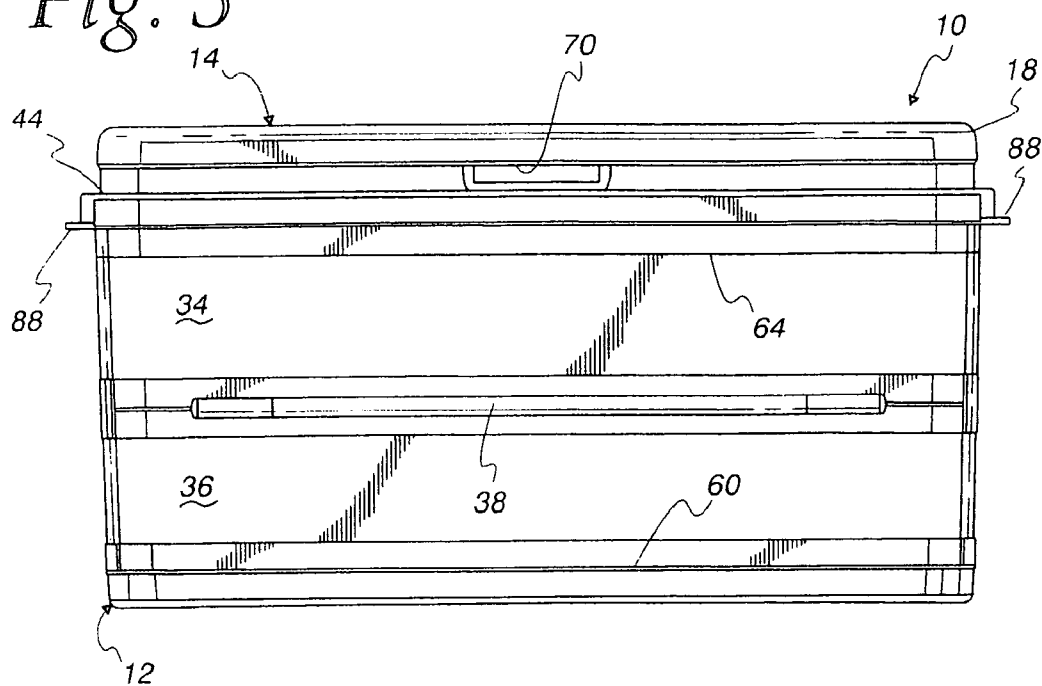
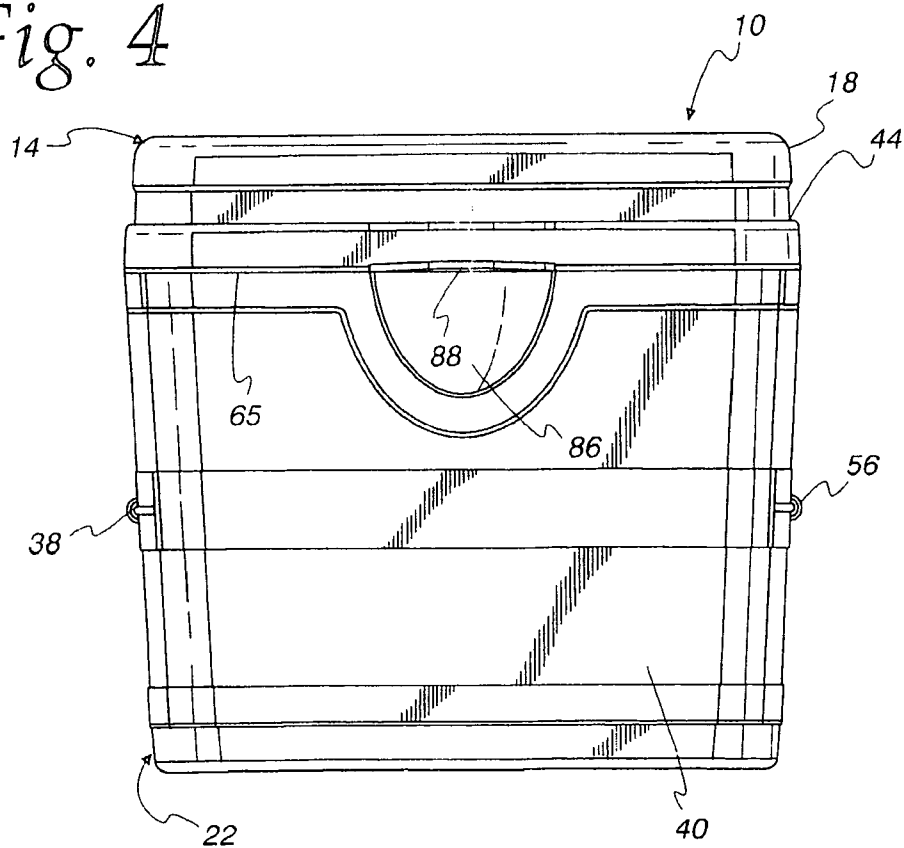


Fig. 4



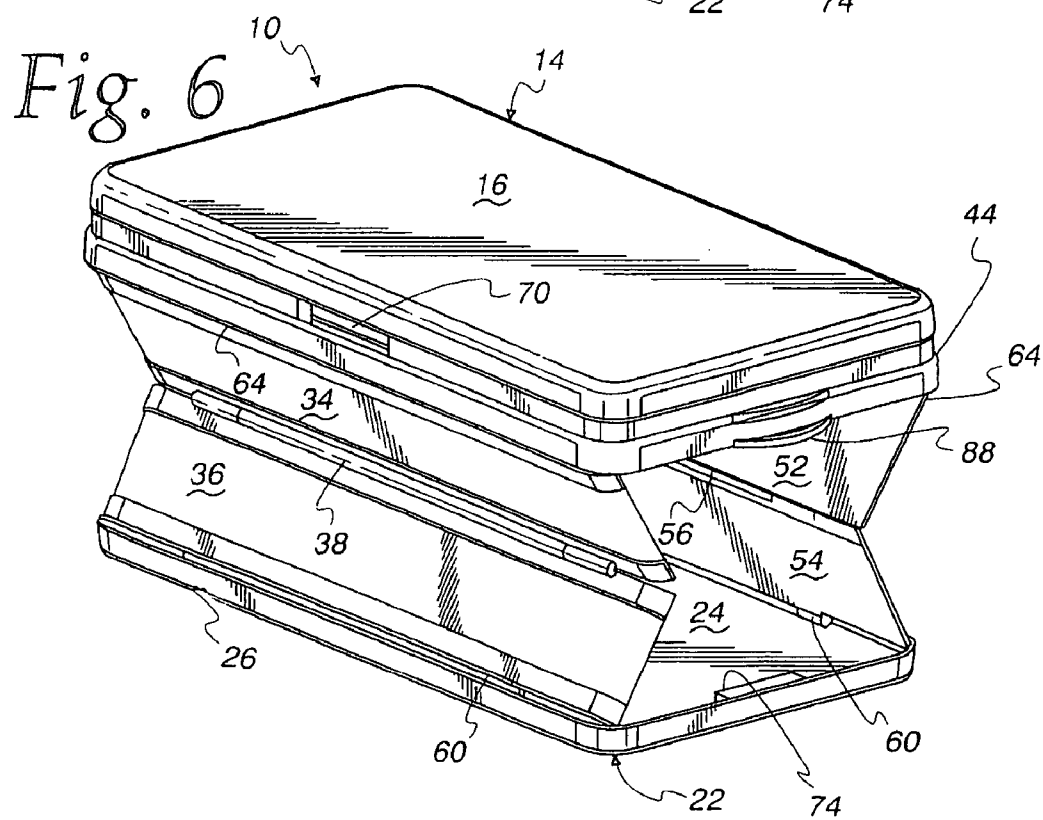
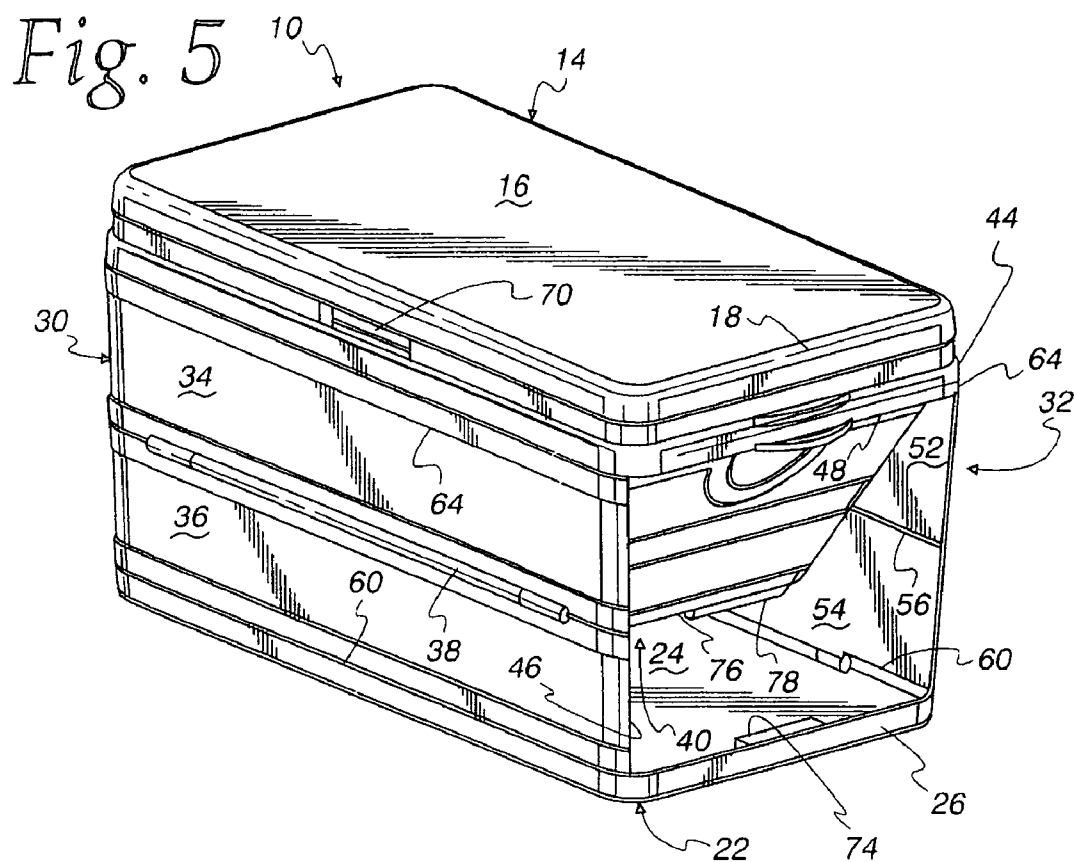


Fig. 7

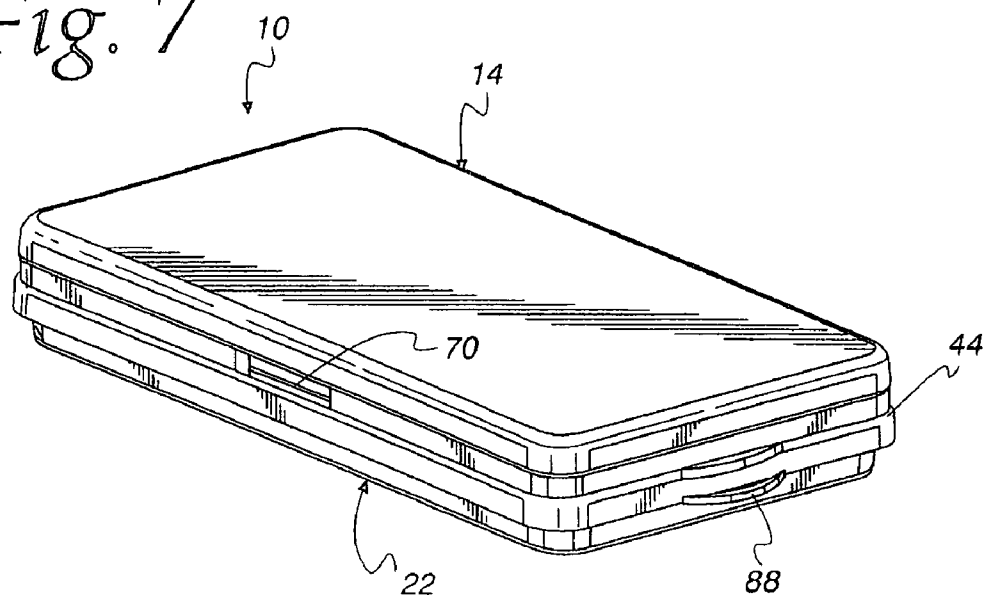


Fig. 8

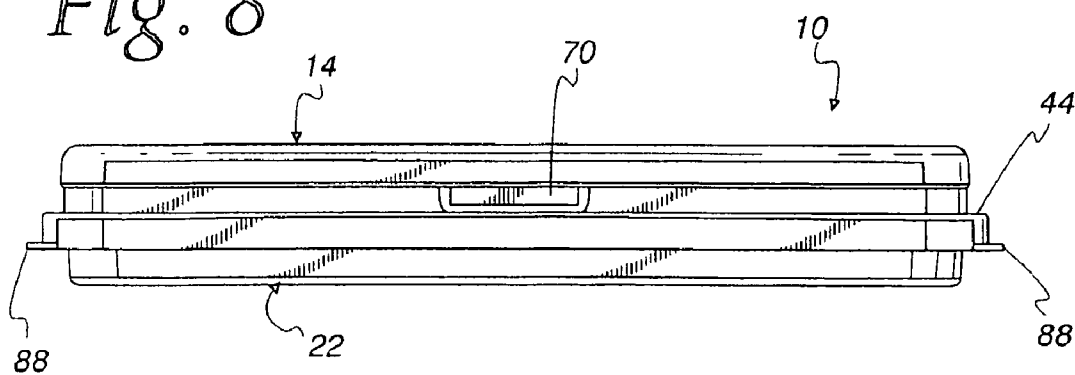


Fig. 9

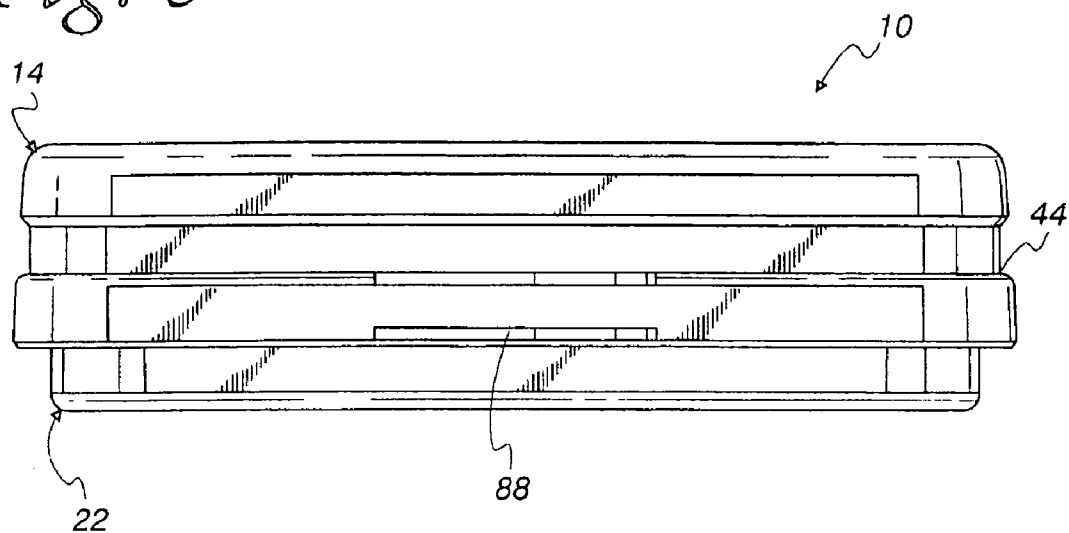


Fig. 10

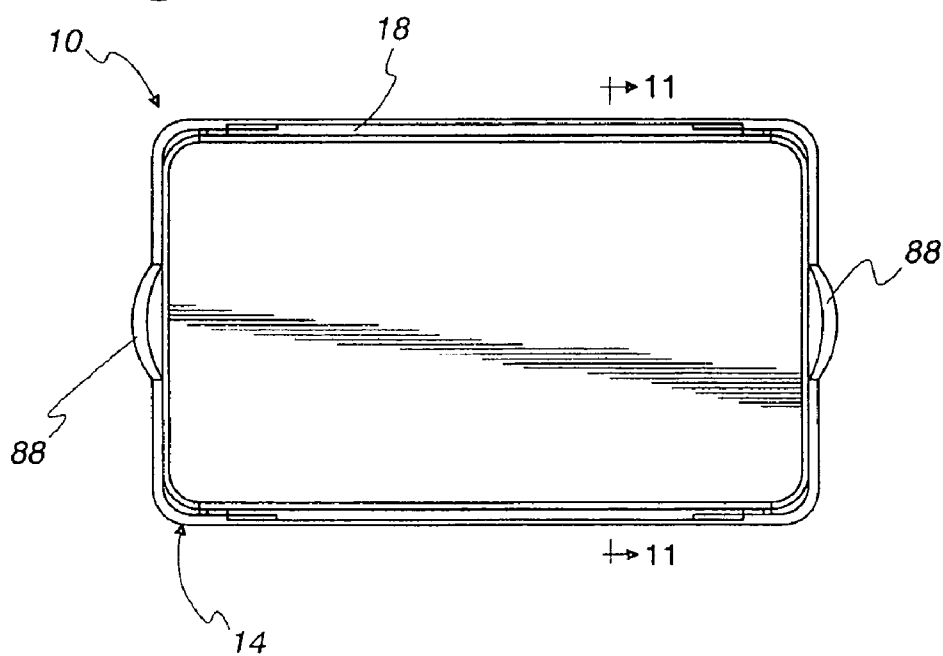


Fig. 11

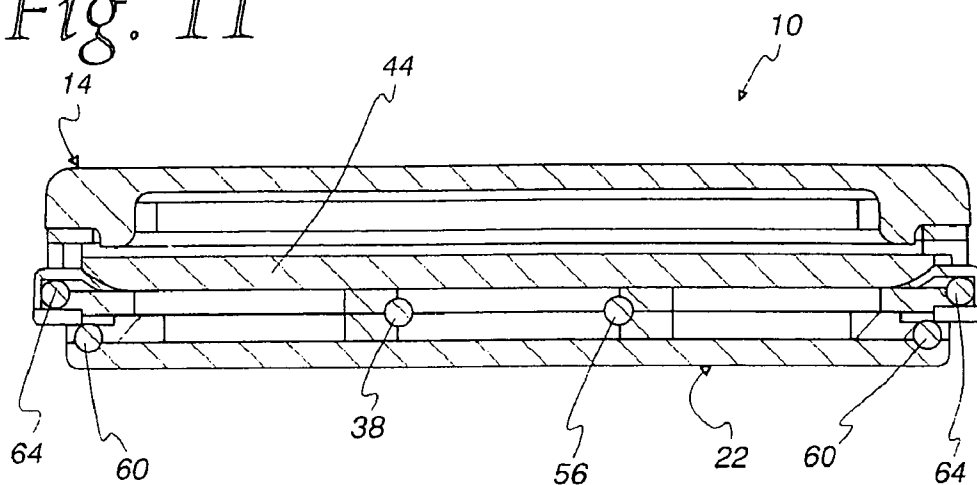


Fig. 12

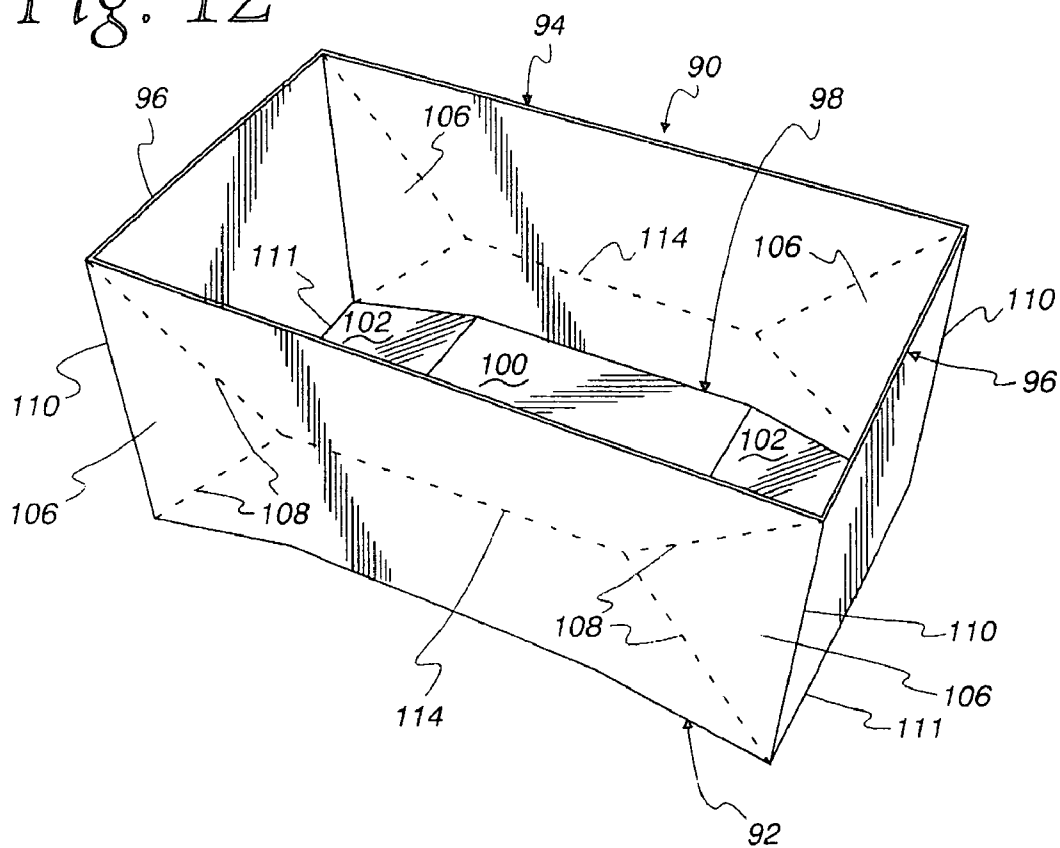


Fig. 13

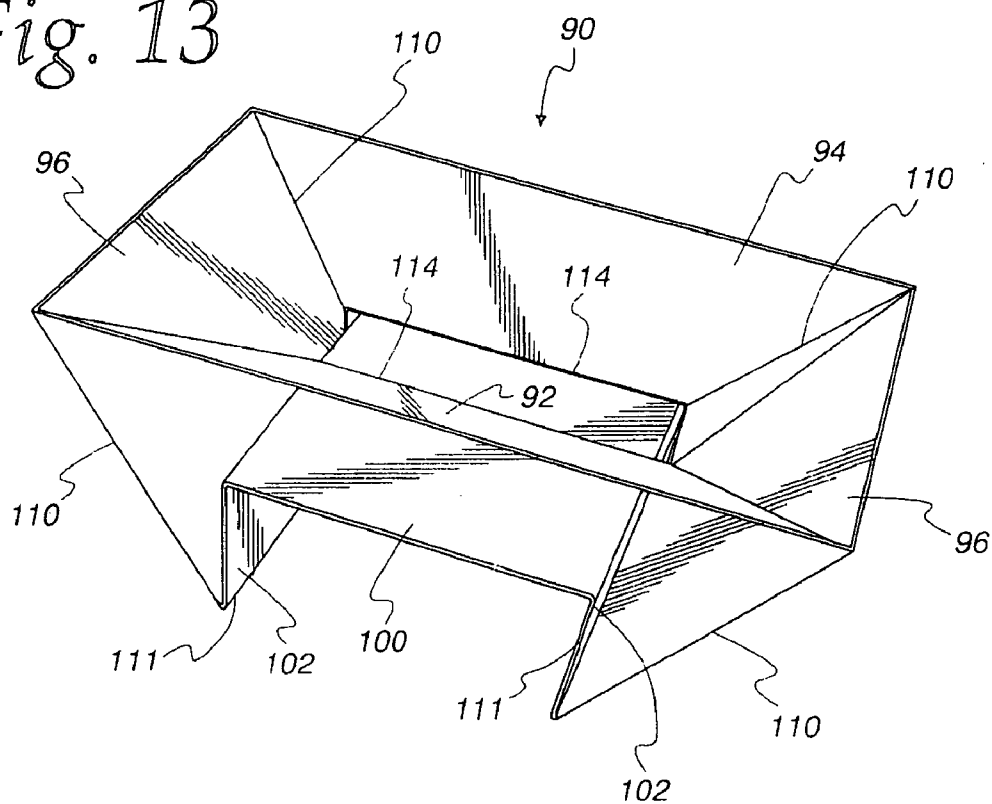
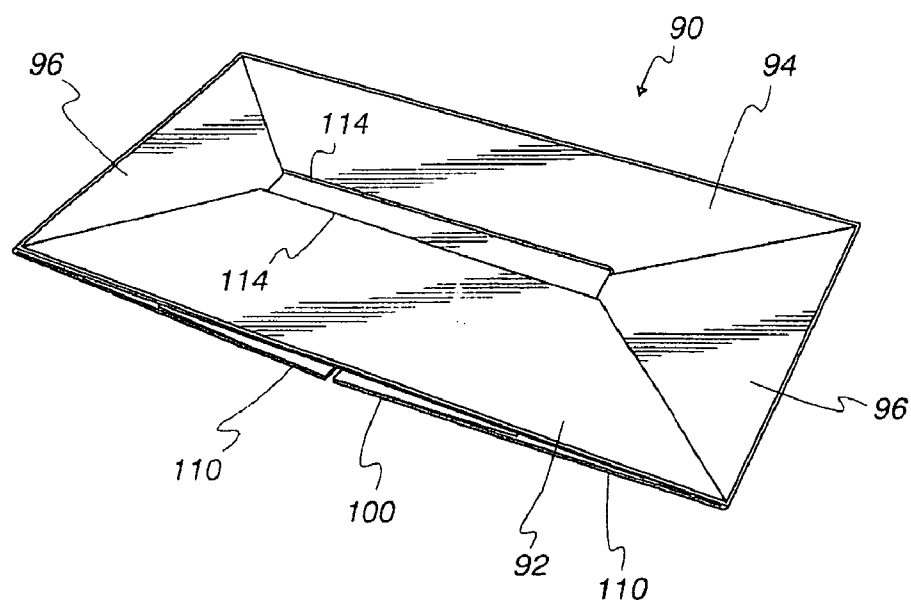


Fig. 14



COLLAPSIBLE CONTAINER USEFUL AS A COOLER

CROSS REFERENCE TO RELATED APPLICATION

[0001] The present application claims the benefit of U.S. Provisional Application Ser. No. 61/124,557, filed Apr. 17, 2008, which is incorporated herein by reference in its entirety.

FIELD OF THE INVENTION

[0002] The present invention relates to the field of collapsible containers useful as coolers of the type used for picnics and other outings to keep beverages, foods and similar items cool.

BACKGROUND OF THE INVENTION

[0003] Lightweight portable containers have been provided in a number of different styles and types having a variety of features, particularly insulated storage containers commonly referred to as "coolers". These types of containers are thermally insulated and typically rely on refrigerated cold packs or ice for cooling the contents of the container, while the insulation minimizes heat exchange with the environment. In U.S. Pre-grant Publication No. US2001/0039807, an insulated container utilizes a separate liner inserted within an outer shell or case. The liner is made of foldable material. In U.S. Pre-grant Publication No. US2003/0213705, a beverage carrier made of sheet material such as plastic or paper board receives a number of beverage containers adjacent a pocket portion that receives a cooling medium such as ice.

[0004] Despite these and other features provided in a variety of different forms, continued improvements are still being sought.

SUMMARY OF THE INVENTION

[0005] In one aspect, the present invention provides a novel and improved collapsible container useful as a cooler, which minimizes the disadvantages associated with the prior art devices and provides advantages in construction, mode of operation, and use. In one embodiment, a collapsible self-supporting container includes a lid, a base panel, a front wall, a rear wall, and a pair of side walls together forming a collapsible box defining an interior chamber for receiving items to be stored and/or cooled. A rigid rectangular frame is positioned below the lid and surrounding an opening for accessing the chamber. The body portion of the container is selectably configurable between collapsed and expanded configurations. The front and rear walls are flexibly attached to both the frame and the base panel and have separate top and bottom panels flexibly joined together. The side walls are flexibly attached to the frame and are engageable with the base panel.

[0006] In one variation, the walls, lid, and base comprise a thermal insulating material, so that the container is useful as a cooler. The insulating material can be an air-filled or gas-filled space within the interior of the lid, base, and/or walls, or alternatively, the insulating material can be a foam insulation within the interior of the lid, base, and/or walls. In another alternative, the lid, base panel, and walls can be constructed, at least in part, from a thermally insulating plastic material, such as a foamed plastic; or the lid, base panel, and/or walls can be lined with an insulating material (e.g., as part of the optional liner or as separate insulating panels joined to the lid, base panel, and/or walls).

[0007] In certain preferred embodiments, the collapsible container includes a collapsible liner insertable within the chamber defined by the container body. The liner is selectably configurable between a collapsed configuration and an expanded configuration (e.g., when the container is collapsed or expanded, respectively). The liner preferably is formed from a single piece of foldable sheet material. If desired, the liner may be made substantially water tight, and can be removable if desired.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] For the purpose of facilitating an understanding of the invention, there is illustrated in the accompanying drawings a preferred embodiment thereof, from an inspection of which, when considered in connection with the following description, the invention, its construction and operation, and many of its advantages should be readily understood and appreciated.

[0009] In the drawings:

[0010] FIG. 1 is a schematic perspective view of a collapsible container according to certain aspects of the present invention.

[0011] FIG. 2 is a top plan view of the container of FIG. 1.

[0012] FIG. 3 is a front elevational view of the container of FIG. 1.

[0013] FIG. 4 is an end elevational view of the container of FIG. 1.

[0014] FIG. 5 is a perspective view of the container of FIG. 1 shown in a first folded position, which is intermediate to the operational and storage configurations of the container.

[0015] FIG. 6 is a perspective view of a second intermediate folded position of the container of FIG. 1.

[0016] FIG. 7 shows the container of FIG. 1 in a collapsed storage configuration.

[0017] FIG. 8 is a front plan view of the collapsed container configuration shown in FIG. 7.

[0018] FIG. 9 is an end view of the collapsed container configuration shown in FIG. 7.

[0019] FIG. 10 is a top plan view of the collapsed container configuration shown in FIG. 7.

[0020] FIG. 11 is a cross-sectional view taken along the line 11-11 of FIG. 10.

[0021] FIG. 12 is a schematic perspective view of a liner for use in a container of the invention.

[0022] FIG. 13 shows the liner of FIG. 12 in a partially folded configuration, which is intermediate between the operational and folded configurations of the liner.

[0023] FIG. 14 is a schematic perspective view of the liner of FIG. 12 showing the liner in a collapsed storage configuration.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0024] For ease of description, containers utilizing collapsible features embodying the present invention are described herein with reference to the usual or customary assembled configuration as shown in the accompanying drawings, and terms such as upper, lower, horizontal, longitudinal, top, bottom, front, back, side, and the like, are used herein with reference to this usual position. However, the cooler equipment may be manufactured, transported, sold, or used in orientations other than those described and shown herein. In the descriptions of the drawings provided below, the term

“cooler” is used for convenience, however, this is not meant to limit the containers of the present invention to insulated containers. All of the descriptions provided below are equally applicable to non-insulated storage containers.

[0025] A collapsible self-supporting container of the present invention is selectably configurable between a collapsed configuration and an expanded operational configuration and comprises a self-supporting container body defining an inner chamber for receiving items to be stored therein and an opening for accessing the chamber. The opening is bounded by a rectangular frame comprising a front member, a rear member, a first side member, and a second side member. The self-supporting container body is also composed or comprised of the following components: (a) an openable lid having dimensions suitable for engaging the frame to seal the opening of the chamber; (b) a generally planar, rectangular base panel having a front edge, a rear edge, a first side edge, and a second side edge opposite the first side edge; (c) a rectangular front wall; (d) a rectangular rear wall; and (e) a pair of opposed side walls (i.e., a first side wall and a second side wall). The frame can be constructed of separate members that are joined together either directly or through corner brackets, or the frame can be a unitary structure, if desired.

[0026] The rectangular front wall has a bottom edge flexibly attached to the front edge of the base panel and generally coterminous therewith. As used herein, the term “generally coterminous” means that the components are of the approximately the same length and are positioned relative to one another such that the ends of the components are substantially aligned. The front panel also has a top edge flexibly attached to the front member of the frame and generally coterminous therewith, as well as a first side edge, and a second side edge. The front wall is composed of a rectangular upper panel and a rectangular lower panel flexibly attached to the upper panel thereof. As used herein, the terms “flexibly attached”, “flexibly connected”, and the like, refer to a bendable attachment of two components, such as can be achieved by a hinge. The term “hinge” encompasses any type of hinge known in the art, including so-called “living” hinges, which typically comprise a linear, relatively flexible area between two relatively more rigid components, such as a line of thin plastic between thicker plastic portions, as is well known in the art.

[0027] The rectangular rear wall has the same height and width as the front wall and includes a bottom edge flexibly attached to the rear edge of the base panel and generally coterminous therewith, a top edge flexibly attached to the rear member of the frame and generally coterminous therewith, a first side edge, and a second side edge. The rear wall is composed of a rectangular upper panel and a rectangular lower panel flexibly attached to the upper panel thereof. Preferably, the upper and lower panels of the front and rear walls are each of the same height and width. The lid is preferably flexibly attached to the rear member of the frame.

[0028] The first side wall of the container body is flexibly attached to the first side member of the frame, is generally coterminous therewith, and has the same height as the front and rear panels. The second side wall is flexibly attached to the second side member of the frame, is generally coterminous therewith, and has the same height and width as the first side wall. The bottom edges of the first and second side walls are releasably engageable with the respective first and second side edges of the base panel.

[0029] In the expanded operational configuration, the side edges of the first and second side walls meet the respective

side edges of the front and rear walls along generally parallel lines and the bottom edges of the first and second side walls are engaged with the respective first and second side edges of the base panel, to form a box-shaped container body that is self-supporting. In the collapsed configuration, the side walls are disengaged from the side edges of the base panel and are folded inward toward one another, the front and rear walls are folded inward at the hinged portion between the respective upper and lower panels thereof, and the frame and lid are displaced toward the base panel. The base panel may have a raised rim about its periphery, if desired. If a raised rim is included, the first and second side walls may overlap the inner sides of the raised portion of the rim when in the expanded configuration, or the side walls may be sized so that the bottom edge of the side wall meets the top edge of the raised rim.

[0030] In a preferred embodiment, the collapsible container of the invention is a collapsible, portable cooler. A collapsible portable cooler is selectably configurable between a collapsed configuration and an expanded operational configuration and comprises a self-supporting container body defining an inner chamber for receiving items to be stored therein and an opening for accessing the chamber. The opening is bounded by a rectangular frame comprising a front member, a rear member, a first side member, and a second side member. The self-supporting container body is also composed or comprised of the following components: (a) an openable lid having dimensions suitable for engaging the frame to seal the opening of the chamber; (b) a generally planar, rectangular base panel having a front edge, a rear edge, a first side edge, and a second side edge; (c) a rectangular front wall; (d) a rectangular rear wall; (e) a pair of opposed side walls (i.e., a first side wall and a second side wall), and (f) an optional liner. The components of the cooler (e.g., the lid, base panel, walls, and/or the liner) include or are constructed from a thermal insulating material such as a foamed plastic, a hollow molded plastic, optionally filled with air, a gas, or a foam. Alternatively, the components of the cooler can be lined with and/or constructed from any other type of thermal insulation known in the art. The frame, lid, front wall, rear wall, side walls and liner of the cooler embodiment are all of substantially the same form and construction as the collapsible container embodiment described above.

[0031] The invention disclosed herein is, of course, susceptible of embodiment in many different forms. Shown in the drawings and described herein below in detail are preferred embodiments of the invention. It is understood, however, that the present disclosure is an exemplification of the principles of the invention and does not limit the invention to the illustrated embodiments.

[0032] Referring to FIGS. 1-11, and initially to FIGS. 1-4, a collapsible container or cooler generally indicated at 10 includes a collapsible, self-supporting body generally indicated at 12, that includes a top or lid 14, including a top panel 16. Lid 14, as with remaining portions of body 12, preferably is made of injection molded polypropylene or other suitable plastics material (e.g., as hollow or “double-walled” panels). When injection molded polypropylene is employed for components of body 12, a relatively thin wall thickness is preferred, generally ranging between 0.06 inches to about 0.125 inches, although other thicknesses may be employed depending upon the contents to be contained within the collapsible cooler as well as other factors affecting the design of the collapsible cooler components, which are well known in the

art. Solid-walled constructions of various portions of the collapsible container, or construction from a foamed polymer or plastic material, are also within the scope of the present invention. In such cases, thicker walls are acceptable.

[0033] As is shown in FIGS. 1-11, collapsible cooler 10 has a first expanded or operational configuration shown for example in FIGS. 1-5 and a second collapsed or storage configuration shown in FIGS. 7-11. FIG. 6 shows an intermediate, partially collapsed configuration. According to one aspect of the present invention, collapsible cooler 10 is collapsible between the operational and storage configurations with the use of components integral to, or built into, the collapsible cooler, and without requiring tools or specialized manipulation. Thus, the collapsible cooler 10 is readily reconfigured between expanded or operational and storage configurations, lending an ease of use heretofore not available to a collapsible cooler having the benefits and advantages apparent from the description herein.

[0034] Referring now to FIG. 5, a bottom or base is generally indicated at 22, which includes a base panel 24 and an upstanding rim 26 surrounding panel 24. Together, panel 24 and rim 26 cooperate to form a tray-like concavity or recess with an upwardly facing opening. As with other body components of collapsible cooler 10, bottom 22 is preferably made of injection molded polypropylene, although other materials and manufacturing techniques can be used throughout the construction of collapsible cooler 10, if desired.

[0035] With continued reference to FIG. 5, collapsible cooler 10 further comprises a front wall generally indicated at 30 and an opposed rear wall 32. Front wall 30 includes respective top and bottom panels 34, 36 and an intermediate wall portion that includes a hinge 38. Hinge 38 of front wall 30, as is preferred with other hinges to be described herein, may take the form of any hinge construction known in the art. As shown in FIG. 5 and other figures, hinge 38 preferably comprises a piano hinge of well known construction, including a pair of leafs joined together by a hinge pin. Alternatively, a less preferred hinge construction for hinge 38 as well as other hinges throughout the collapsible cooler 10 may comprise a so-called "living hinge" formed by a line of weakness in a portion of plastic or other foldable material that allows the plastic material to fold about a fold line. Also visible in FIGS. 1, 4, and 5 is one of two opposed side walls generally indicated at 40. Each side wall 40 preferably comprises a "one-piece" construction having a height generally equal to the height of front and rear walls 30, 32 and a width corresponding generally to the distance between front and rear end walls 30, 32. If desired, the walls can include reinforcing features, such as ribs, struts, and the like. Alternatively, one or both side walls 40 may be constructed in a manner similar to front and rear walls 30, 32 with an intermediate hinge, if desired, although this is generally not preferred due to increased manufacturing costs and complexity of construction. Side walls 40 are preferably joined to the bottom edge of frame 44 by hinges 48.

[0036] Referring again to FIG. 5, a generally rigid collar or frame 44 is located between rim 18 of lid 14 and the upper edges of front and rear walls 30, 32 as well as side walls 40. Frame 44 preferably is made of rigid plastic construction and has a hoop shape, which in conjunction with base panel 24, helps to provide rigidity to the collapsible cooler. The walls of the container meet at vertical corners 46 as shown for example in the foreground portion of FIG. 1. As can be seen in FIG. 4, frame 44 has a preferred stepped configuration with a top

portion dimension to match lid 14 and a larger bottom portion dimension to accommodate front and rear walls 30, 32 and side walls 40.

[0037] With continued reference to FIG. 5, rear wall 32 is preferably fashioned as a mirror image of front wall 30 and includes top and bottom panels 52, 54 joined together by hinge 56. The front and rear walls 30, 32 are preferably joined by hinges 60 to base 22. Preferably, hinges 60 are located at the top edge of rim 26 as can be seen for example in the foreground portion of FIG. 6, but also could be joined to bottom panel 24 or the corner juncture of bottom panel 24 and the bottom of rim 26, if desired.

[0038] As shown, for example, in FIG. 6, a hinge 64 joins the upper portion of front top panel 34 to the bottom edge of frame 44. A second hinge 64 also joins top panel 52 of rear wall 32 to the bottom edge of frame 44, located at the rear of collapsible cooler 10. Thus, the front and rear walls 30, 32 are flexibly joined at their upper ends to frame 44 while the bottom ends of front and rear walls 30, 32 are flexibly joined to bottom 22 as can be seen, for example, in FIG. 6. In contrast, only the upper ends of side walls 40 are connected to the side members of frame 44, while the lower edges of side walls 40 comprise free edges of the side walls.

[0039] Various interlocking and latching devices preferably are included in collapsible cooler 10 to aid in maintaining rigidity, especially in the operational position, but may be omitted if desired. For example, a latch can be situated in an indentation 70 shown in FIGS. 1, 5 and 6. A latch located in recess 70, when present, preferably is adapted to provide engagement with rim 18 of top 14 and preferably is releasably engageable therewith. FIGS. 5 and 6 also illustrate an interlocking arrangement at the bottom of end walls 40 and the end portions of base 22. A projection 74 is receivable in a notch 76 formed between projections 78 carried on the bottom free edges of side walls 40.

[0040] With the side walls 40 completely closed to assume an operational position, projections 74, 78 engage with one another to enhance the lateral, front-to-back stability and further aid in preventing racking of collapsible cooler 10 when configured in the operational position shown for example in FIG. 1. Lid 14 is preferably joined to the upper end of frame 44 by a hinge 82, although in a less preferred embodiment, lid 14 could be made to be separable from the remainder of the collapsible cooler body, if desired. If so, it is generally preferred that an opposed recessed latch be provided to provide a point of attachment between lid 14 and frame 44, opposite indent 70 shown for example in FIG. 1.

[0041] Referring for example to FIG. 1, end walls 40 are provided with a hand hold recess 86 and an overhanging handle portion 88 to facilitate a users grasping of the ends of collapsible cooler 10 to lift the cooler from one elevation to another. Preferably, handle 88 extends from the bottom edge of collar 44, as can be seen, for example, in FIG. 6. As shown, for example, in FIGS. 7-9, when in the collapsed configuration, collapsible cooler 10 assumes a relatively low profile, with a height generally equal to or somewhat greater than the combined heights of lid 14, collar 44 and base 22. The remaining components of collapsible cooler 10 are flexibly collapsed for storage within this configuration as can be seen, for example, in the cross-sectional view of FIG. 11.

[0042] As will now be appreciated, self-supporting, collapsible body 12 is formed from opposed bottom and top walls, opposed front and rear walls having top and bottom portions and a pair of opposed end walls having top and

bottom portions. The lid, the bottom, the front, the rear and the side walls are arranged to form a collapsible, self-supporting six-sided enclosure defining an internal cavity for items to be stored. The lid is flexibly connected to a frame to form an access to the cavity. Top portions of the front and rear walls and the side walls are flexibly connected to the frame, while bottom portions of the front and rear walls are flexibly connected to the base panel. The top and bottom portions of the front and rear walls may form portions of an integral wall construction, they may also be separate from one another and coupled to one another.

[0043] As used herein, the terms “coupled”, “coupling” and the like, describe both direct connections between members, as well as connections between members through one or more intermediate members. In the embodiment shown in the figures, for example, the top and bottom portions of the front and rear walls comprise separate panels that are coupled together (either directly to one another or through use of one or more intermediate members). Preferably, the coupling of the top and bottom portions of the front and rear walls is flexible, e.g., employing an intermediate hinge, with the top portion or panel of the front and the rear walls being “connected” (i.e. directly connected) to one side of an intermediate hinge, and with the bottom portion being “connected” (i.e. directly connected) to the other side of the intermediate hinge. The body is thereby rendered collapsible to bring the frame adjacent the base panel. Preferably, the top and bottom portions of the front and the rear walls are separate from one another, and are flexibly connected together by intermediate hinges. Further, bottom portions of the end walls have free edges so that the top portions of the end walls are swingable about the frame.

[0044] FIG. 11 shows a cross-sectional view along line 11-11 of FIG. 10. This figure illustrates the manner in which the walls, lid and bottom panel of container 10 nest together when in the collapsed storage configuration, as well as the relative positions of hinges 38, 56, 60, 64.

[0045] Turning now to FIGS. 12-14, an optional foldable liner generally indicated at 90 includes opposed front and rear walls 92, 94 and opposed side walls 96. A base panel generally indicated at 98 has a central portion 100 and lateral portions 102 extending from the central portion. Front and rear walls 92, 94 are similar to one another, and include triangular portions 106 formed by fold lines 108 and outside corners 110. Front and rear walls 92, 94 further include horizontal fold lines 114 joining the apices of opposed triangular portions 106. Liner 90 is shown in an intermediate folded configuration in FIG. 13 and a fully collapsed or storage configuration shown in FIG. 14.

[0046] Preferably, liner 90, in its operational configuration shown in FIG. 12, is adapted for insertion within the operationally configured collapsible cooler 10 (as shown in FIG. 1), and is further adapted by folding, to assume the collapsed or storage configuration shown in FIG. 14. In their preferred embodiments, with the liner installed within body 12 of cooler 10, preferably by connecting end walls 96 of the liner to end walls of body 12. In some embodiments, the body and liner are simultaneously and automatically collapsed with no special manual intervention required for the simultaneous configuring of the liner and body. The liner 90 may be lifted into and out of collapsible cooler 10, but preferably remains within collapsible cooler 10, being joined to end panels 40 thereof. In this manner, as the ends 40 of the cooler are folded inwardly, the liner 90 preferably is collapsed in the manner indicated in FIGS. 13 and 14 to fold within the collapsed body

12 of collapsible cooler 10 to assume the collapsed configuration of liner 90, shown in FIG. 14. Liner 90 may be made of virtually any foldable material as may be desired, especially a waterproof material, but preferably is made of one or more layers of polyethylene and optionally in combination with insulation, especially foldable sheets of insulation material, if desired.

[0047] Folding of the preferred form of liner 90 is shown in FIGS. 12-14, which illustrate a fully expanded or operational configuration in FIG. 12, an intermediate partially folded configuration in FIG. 13 and a fully collapsed configuration in FIG. 14. As can be seen by comparing FIGS. 12 and 13, the various fold lines of the liner sidewalls 92, 94 and the fold lines between bottom portions 100, 102 cooperate to allow the bottom of the liner to collapse to allow the bottom outside corners 111 to be brought close to one another (see FIGS. 12 and 13) and eventually placed against the bottom surface of central bottom wall portion 100 (see FIG. 14). In the fully collapsed configuration of the liner, shown in FIG. 14, fold lines 114 are moved inwardly toward one another.

[0048] Preferably, the collapsible self-supporting body 12 described herein, when placed in combination with liner 90, provides a rugged, but collapsible, outer casing for protecting and optionally supporting liner 90. Accordingly, it is generally preferred that body 12 of the collapsible cooler when arranged in the fully assembled operational configuration, is interlocked one component with another so that the body structure is generally self supporting so as to resist unintentional collapse upon application of outside loadings and forces. With the present invention, these features are provided even with body components of relatively thin light weight construction. Further, these features allow liner 90 to be made of thin sheet material which need not be self supporting since support is available from the operationally configured body 12. Body 12 may be employed with liners that are also relatively rigid and self supporting, although the preferred arrangement indicated for example in FIG. 1 allows both body 12 and liner 90 to be collapsed together between their respective operational and storage configurations.

[0049] The foregoing descriptions and the accompanying drawings are illustrative of the present invention. Still other variations and arrangements of parts are possible without departing from the spirit and scope of this invention. Further, the invention consists of certain novel features and a combination of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the details may be made to one or more of these features without departing from the spirit, or sacrificing any of the advantages of the present invention.

[0050] The use of the terms “a” and “an” and “the” and similar referents in the context of describing the invention (especially in the context of the following claims) are to be construed to cover both the singular and the plural, unless otherwise indicated herein or clearly contradicted by context. The terms “comprising,” “having,” “including,” and “containing” are to be construed as open-ended terms (i.e., meaning “including, but not limited to,”) unless otherwise noted. Recitation of ranges of values herein are merely intended to serve as a shorthand method of referring individually to each separate value falling within the range, unless otherwise indicated herein, and each separate value is incorporated into the specification as if it were individually recited herein. All methods described herein can be performed in any suitable

order unless otherwise indicated herein or otherwise clearly contradicted by context. The use of any and all examples, or exemplary language (e.g., “such as”) provided herein, is intended merely to better illuminate the invention and does not pose a limitation on the scope of the invention unless otherwise claimed. No language in the specification should be construed as indicating any non-claimed element as essential to the practice of the invention.

What is claimed is:

1. A collapsible self-supporting container comprising a self-supporting container body defining an inner chamber for receiving items to be stored therein and an opening for accessing the chamber, the opening being bounded by a rectangular frame comprising a front member, a rear member, a first side member, and a second side member; the self-supporting container body being selectably configurable between a collapsed configuration and an expanded operational configuration;

the container body further comprising:

an openable lid having dimensions suitable for engaging the frame to seal the opening of the chamber;

a rectangular base panel having a front edge, a rear edge, a first side edge, and a second side edge;

a rectangular front wall including a bottom edge flexibly attached to the front edge of the base panel and generally coterminal therewith, a top edge flexibly attached to the front member of the frame and generally coterminal therewith, a first side edge, and a second side edge; the front wall being composed of a rectangular upper panel and a rectangular lower panel flexibly attached to the upper panel thereof;

a rectangular rear wall having the same height and width as the front wall and including a bottom edge flexibly attached to the rear edge of the base panel and generally coterminal therewith, a top edge flexibly attached to the rear member of the frame and generally coterminal therewith, a first side edge, and a second side edge; the rear wall being composed of a rectangular upper panel and a rectangular lower panel flexibly attached to the upper panel thereof;

a first side wall flexibly attached to the first side member of the frame and generally coterminal therewith, the first side wall having the same height as the front and rear panels;

a second side wall flexibly attached to the second side member of the frame and generally coterminal therewith, the second side wall having the same height and width as the first side wall;

the bottom edges of the first and second side walls being releasably engageable with the respective first and second side edges of the base panel;

wherein, in the expanded operational configuration, the side edges of the first and second side walls meet the respective side edges of the front and rear walls along generally parallel lines, and the bottom edges of the first and second side walls are engaged with the respective first and second side edges of the base panel, to form a box-shaped container body that is self supporting; and in the collapsed configuration, the side walls are disengaged from the side edges of the base panel and are folded inward toward one another, the front and rear walls are folded inward at the hinged portion between the respective upper and lower panels thereof, and the frame and lid are displaced toward the base panel.

2. The container of claim 1 wherein the side walls are rigid panels.

3. The container of claim 1 further comprising a collapsible liner within the container body, and configurable between a collapsed configuration and an expanded configuration.

4. The container of claim 3 wherein the liner is substantially water tight.

5. The container of claim 3 wherein the liner is formed from plastic material.

6. The container of claim 3 wherein the liner is removable from the container body.

7. The container of claim 1 wherein the lid, front wall, rear wall, base panel and side walls of the container body are made of one or more molded plastic materials.

8. The container of claim 1 wherein the container body comprises a thermal insulating material.

9. The container of claim 1 wherein the lid is flexibly attached to the rear member of the frame.

10. The container of claim 1 wherein the upper and lower panels of the front and rear walls each have generally the same width and height.

11. The container of claim 1 wherein the first and second side walls each include a handle.

12. A portable cooler, comprising:

a self-supporting container body defining an insulated inner chamber for receiving items to be stored therein and an opening for accessing the chamber, the opening being bounded by a rectangular frame comprising a front member, a rear member, a first side member, and a second side member; the self-supporting container body being selectably configurable between a collapsed configuration and an expanded operational configuration;

the container body further comprising:

an openable lid having dimensions suitable for engaging the frame to seal the opening of the chamber;

a rectangular base panel having a front edge, a rear edge, a first side edge, and a second side edge;

a rectangular front wall including a bottom edge flexibly attached to the front edge of the base panel and generally coterminal therewith, a top edge flexibly attached to the front member of the frame and generally coterminal therewith, a first side edge, and a second side edge; the front wall being composed of a rectangular upper panel and a rectangular lower panel flexibly attached to the upper panel thereof;

a rectangular rear wall having the same height and width as the front wall and including a bottom edge flexibly attached to the rear edge of the base panel and generally coterminal therewith, a top edge flexibly attached to the rear member of the frame and generally coterminal therewith, a first side edge, and a second side edge; the rear wall being composed of a rectangular upper panel and a rectangular lower panel flexibly attached to the upper panel thereof;

a first side wall flexibly attached to the first side member of the frame and generally coterminal therewith, the first side wall having the same height as the front and rear panels;

a second side wall flexibly attached to the second side member of the frame and generally coterminal therewith, the second side wall having the same height and width as the first side wall;

the bottom edges of the first and second side walls being releasably engageable with the respective first and second side edges of the base panel;

wherein, in the expanded operational configuration, the side edges of the first and second side walls meet the respective side edges of the front and rear walls along generally parallel lines and the bottom edges of the first and second side walls are engaged with the respective first and second side edges of the base panel, to form a box-shaped container body that is self supporting; and in the collapsed configuration, the side walls are disengaged from the side edges of the base panel and are folded inward toward one another, the front and rear walls are folded inward at the hinged portion between the respective upper and lower panels thereof, and the frame and lid are displaced toward the base panel;

and wherein one or more of the lid, base panel, front wall, rear wall, and side walls are thermally insulated.

13. The cooler of claim **12** wherein each of the first and second side walls includes a handle.

14. The cooler of claim **12** further comprising a collapsible liner within the container body, and collapsible between a collapsed configuration and an expanded configuration.

15. The cooler of claim **14** wherein the liner is substantially water tight.

16. The cooler of claim **14** wherein the liner is removable from the container body.

17. The cooler of claim **12** wherein the lid, front wall, rear wall, base panel and side walls of the container body are made of one or more molded plastic materials.

18. The cooler of claim **12** wherein the lid is flexibly attached to the rear member of the frame.

19. The cooler of claim **12** wherein the upper and lower panels of the front and rear walls each have generally the same width and height.

20. The cooler of claim **12** wherein the side walls are generally rigid.

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