



US 20040178208A1

(19) **United States**

(12) **Patent Application Publication**

**Leba et al.**

(10) **Pub. No.: US 2004/0178208 A1**

(43) **Pub. Date: Sep. 16, 2004**

(54) **ICE CHEST**

**Publication Classification**

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(51) **Int. Cl.<sup>7</sup>** ..... **B65D 25/10**; B65D 53/00; B65D 81/24

(52) **U.S. Cl.** ..... **220/761**

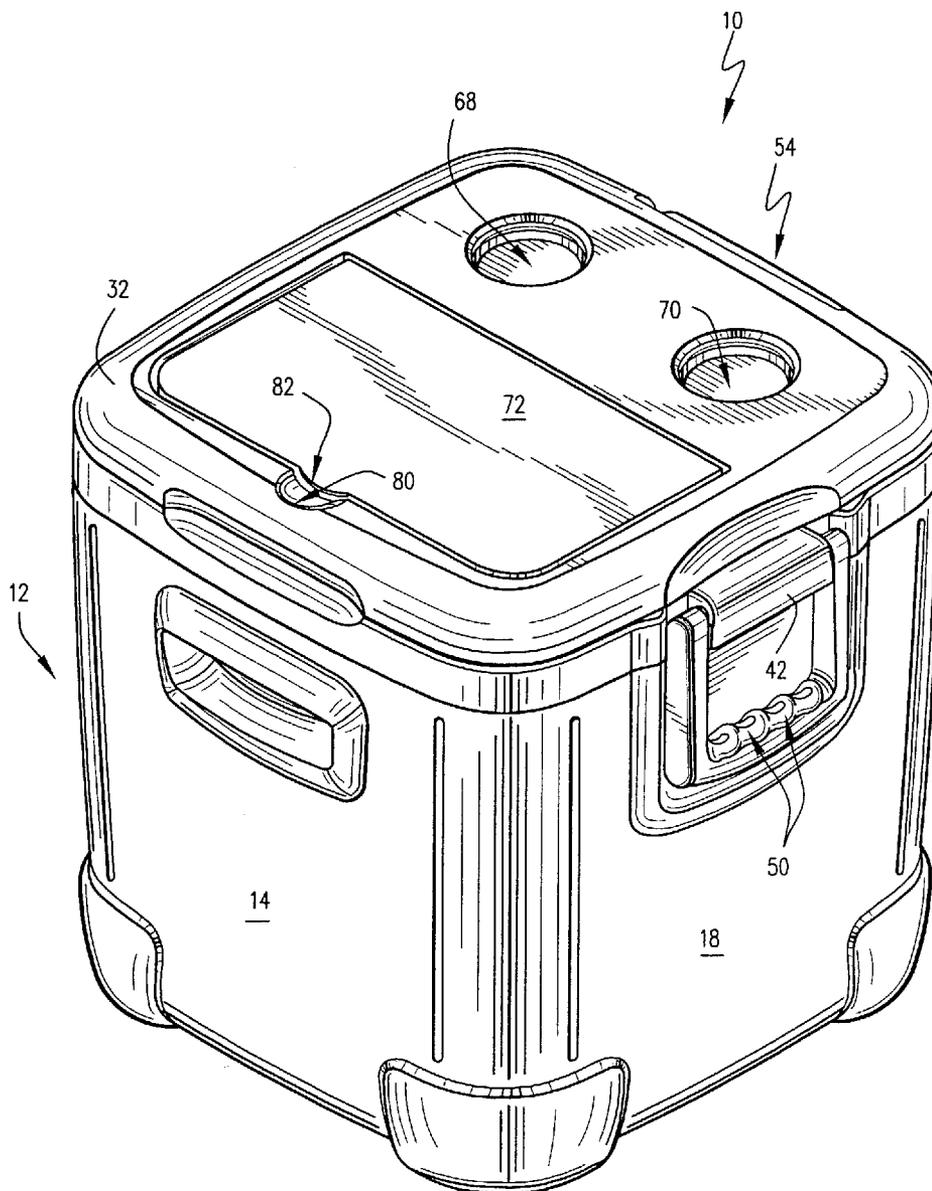
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(57) **ABSTRACT**

A generally cube shaped ice chest having a handle on each side to facilitate lifting and carrying and to be more ergonomic. The ice chest provides a lid compartment for accessory and/or snack storage and tray tabs are provided in the interior of the ice chest for holding a cooler tray in position.

(21) Appl. No.: **10/386,098**

(22) Filed: **Mar. 12, 2003**



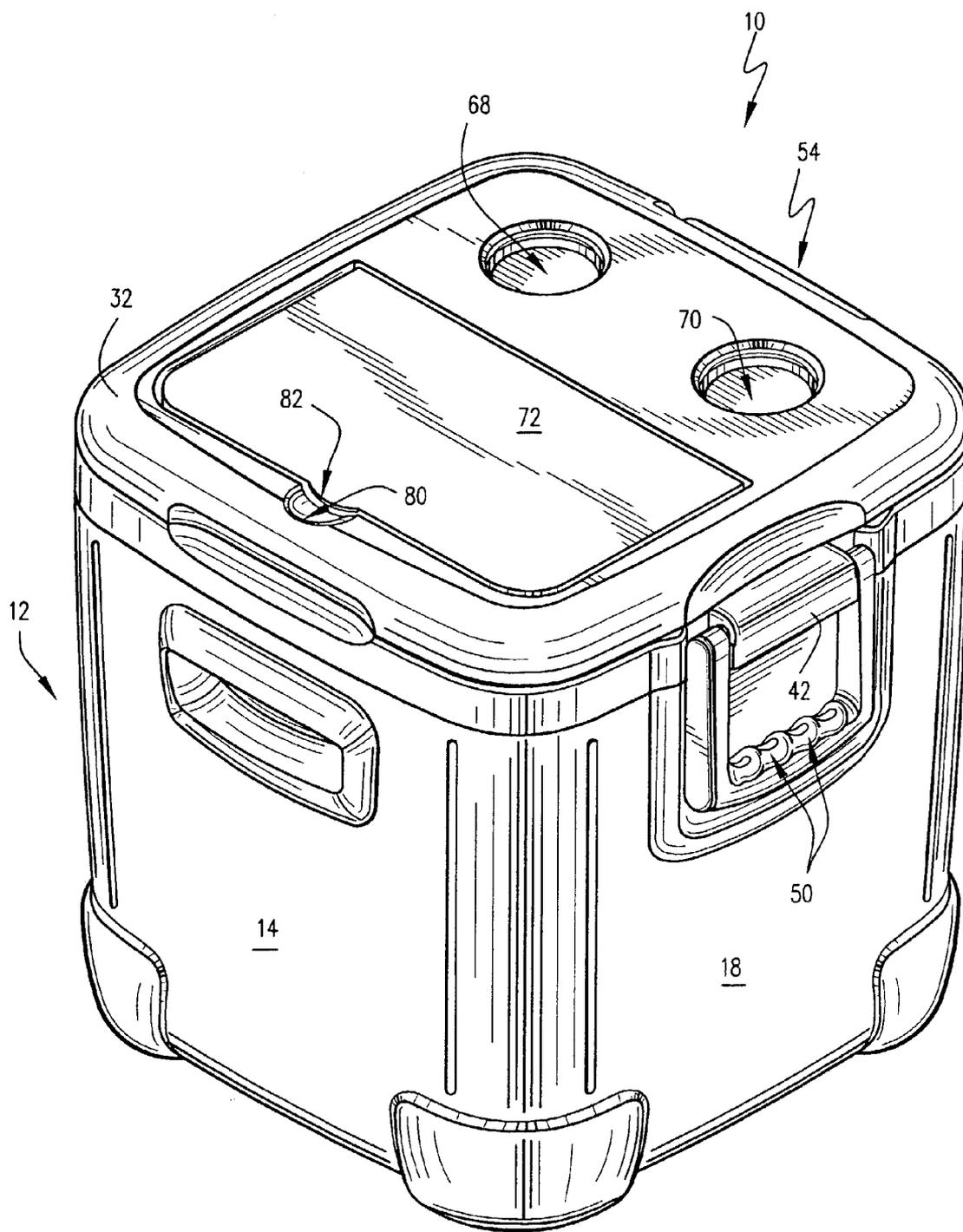


Fig.1

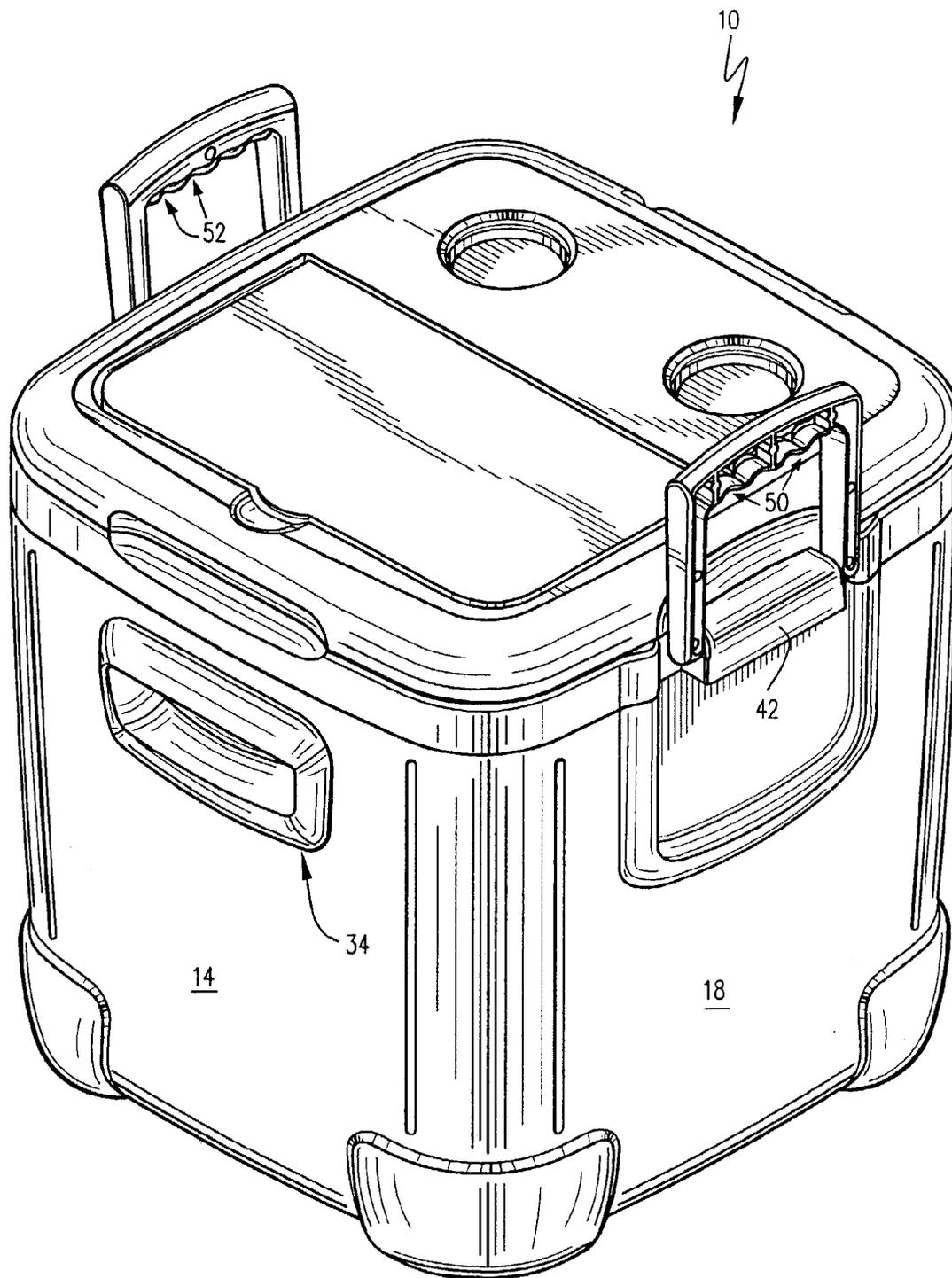


Fig.2

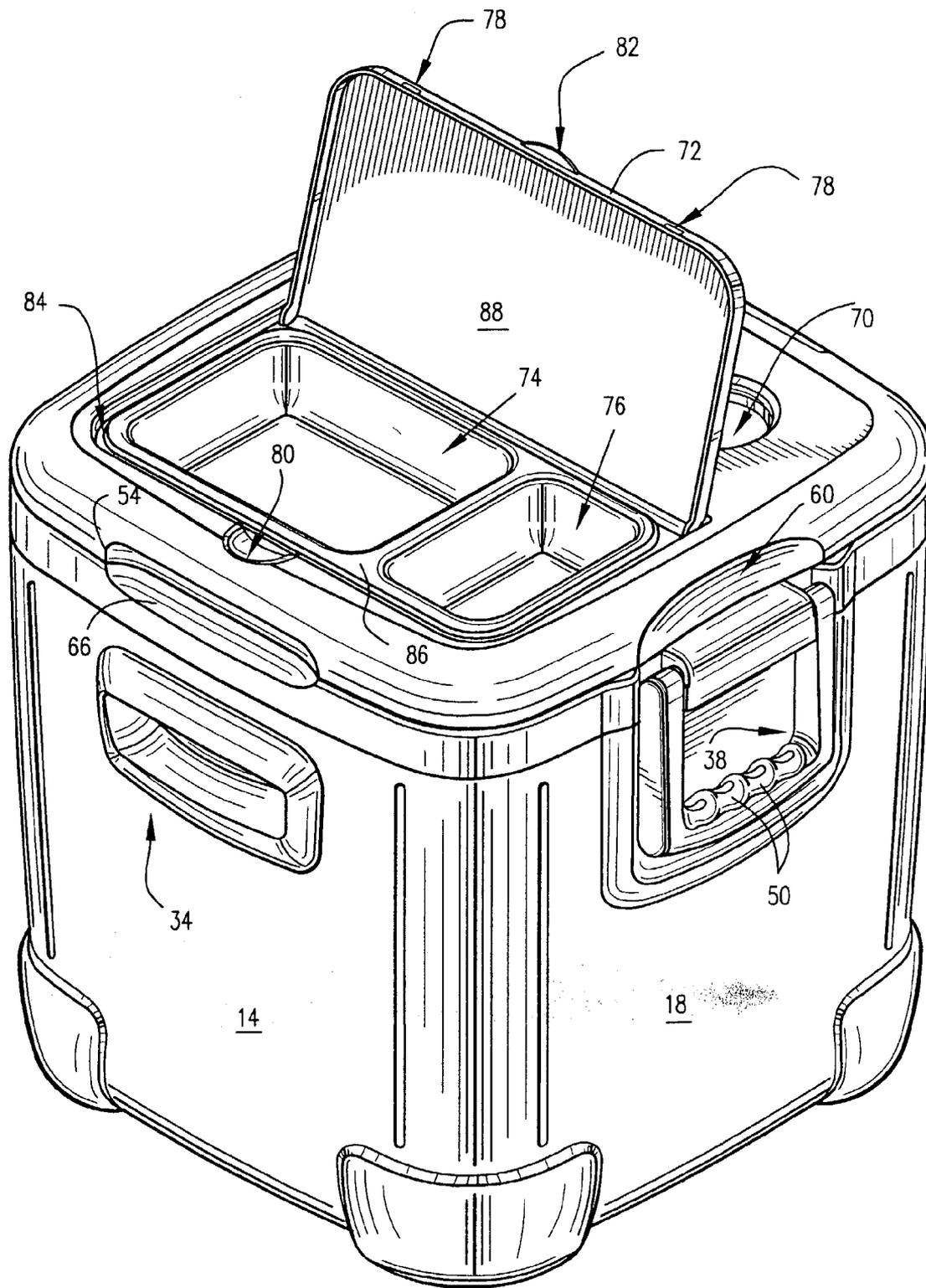
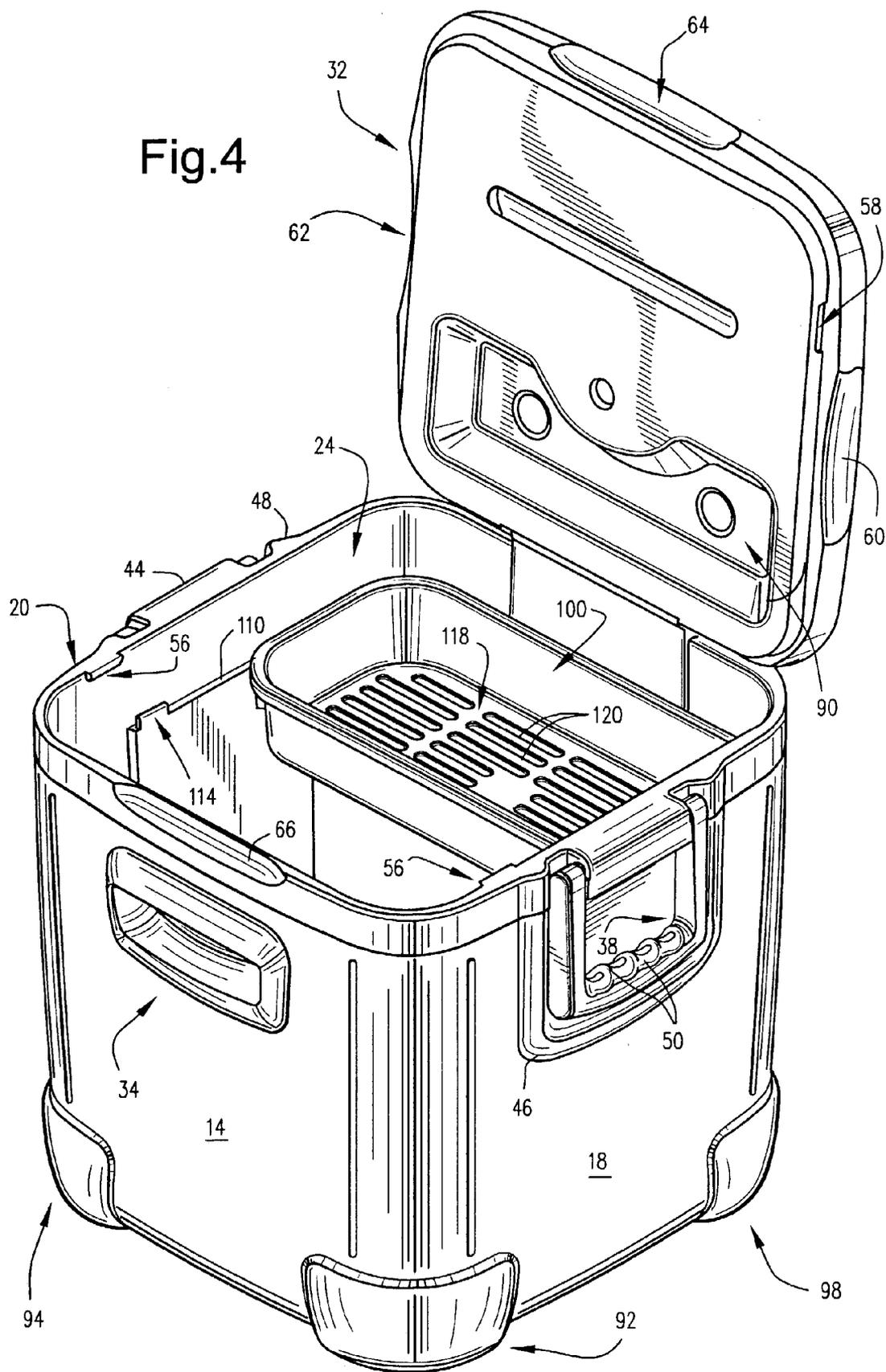


Fig.3

Fig.4



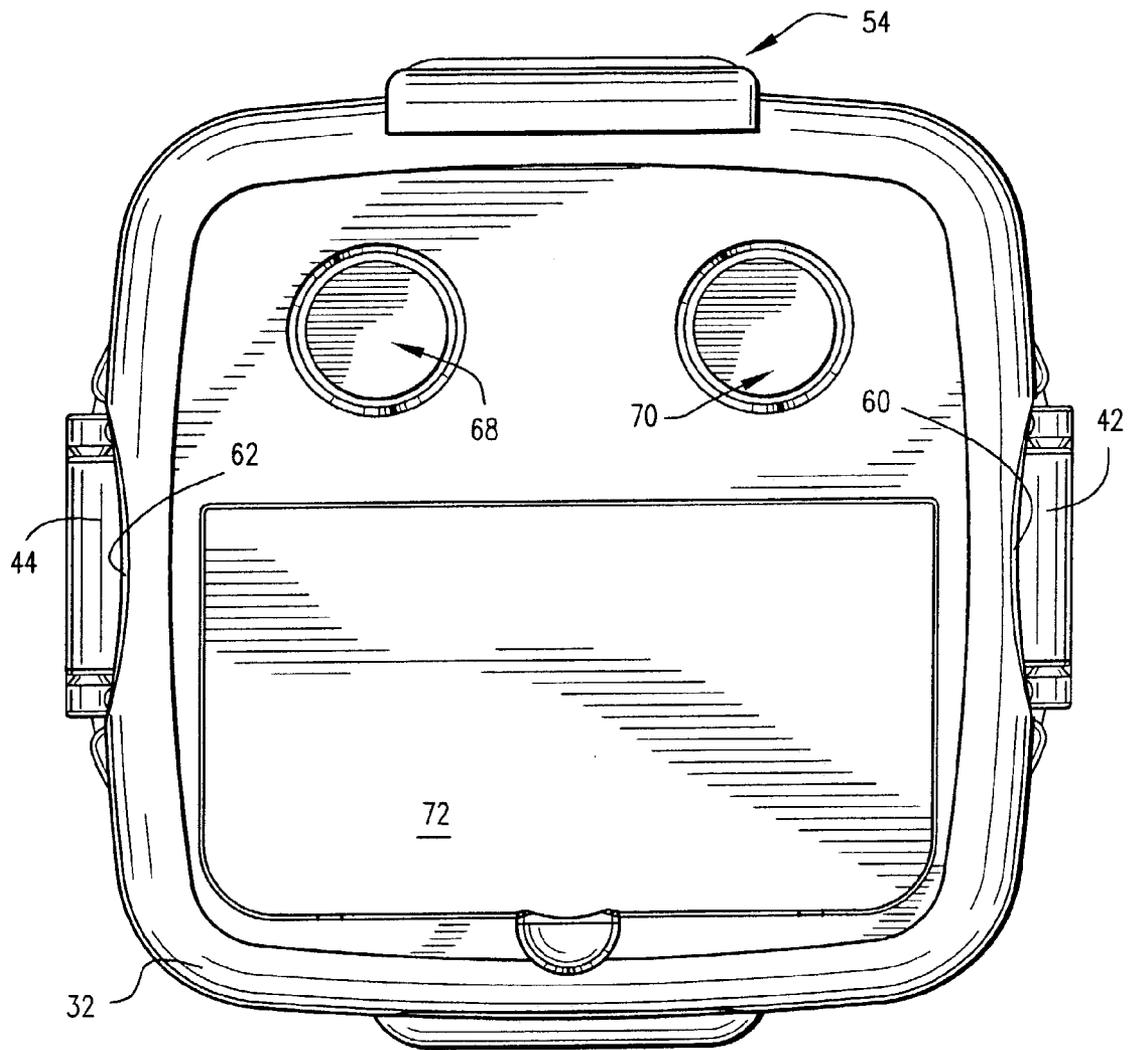
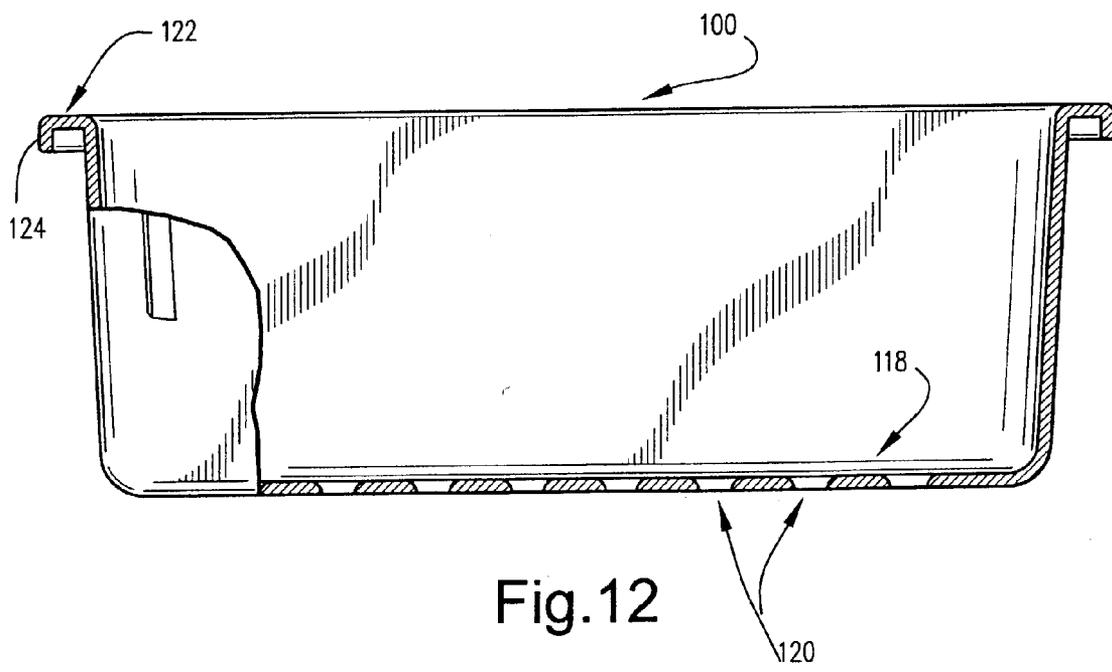
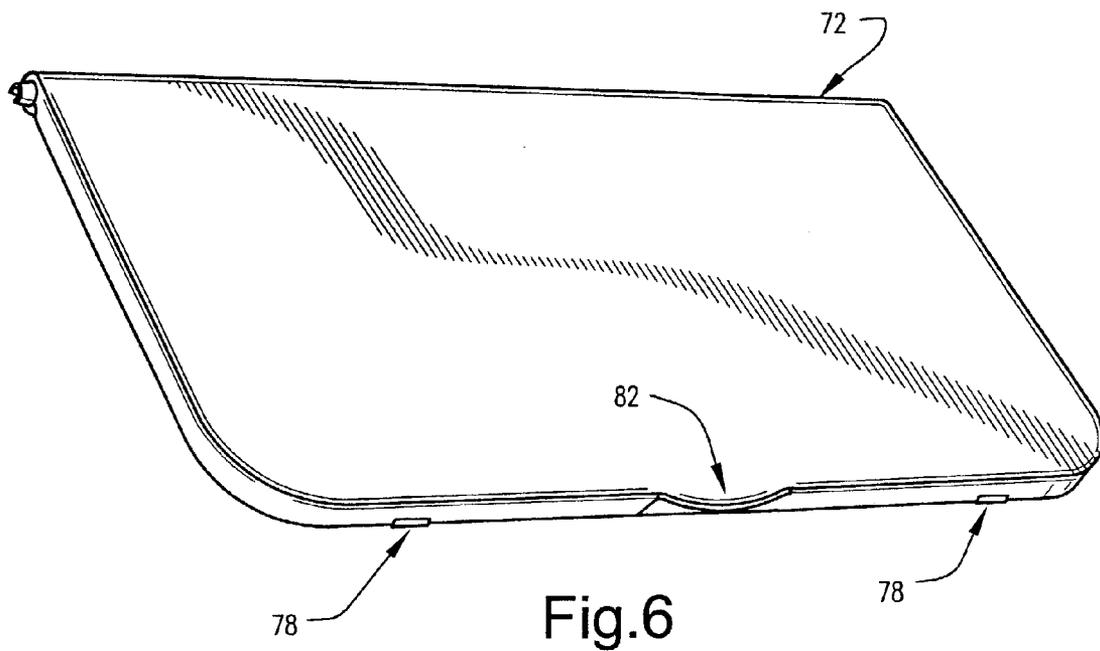


Fig.5



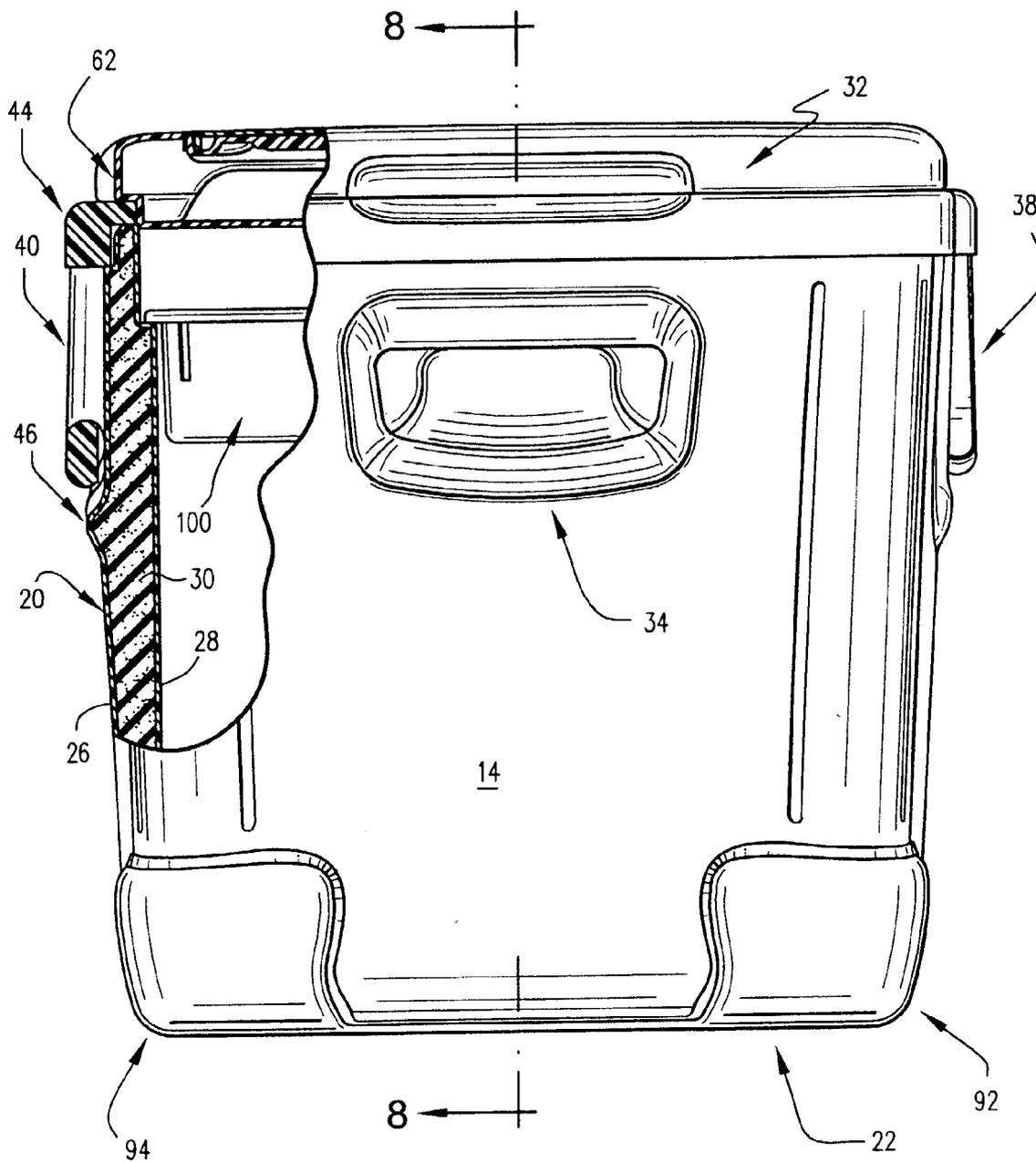


Fig.7

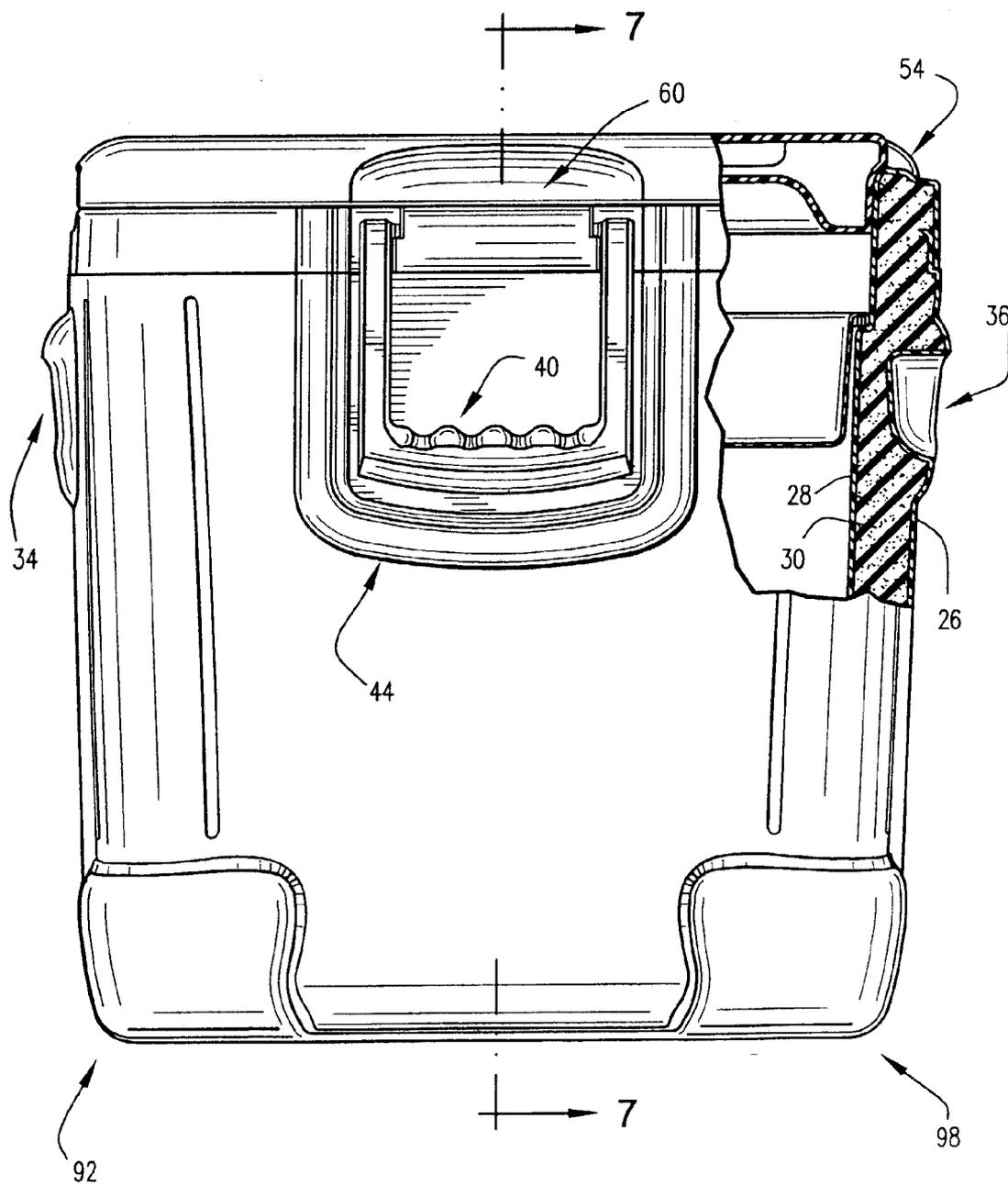


Fig.8

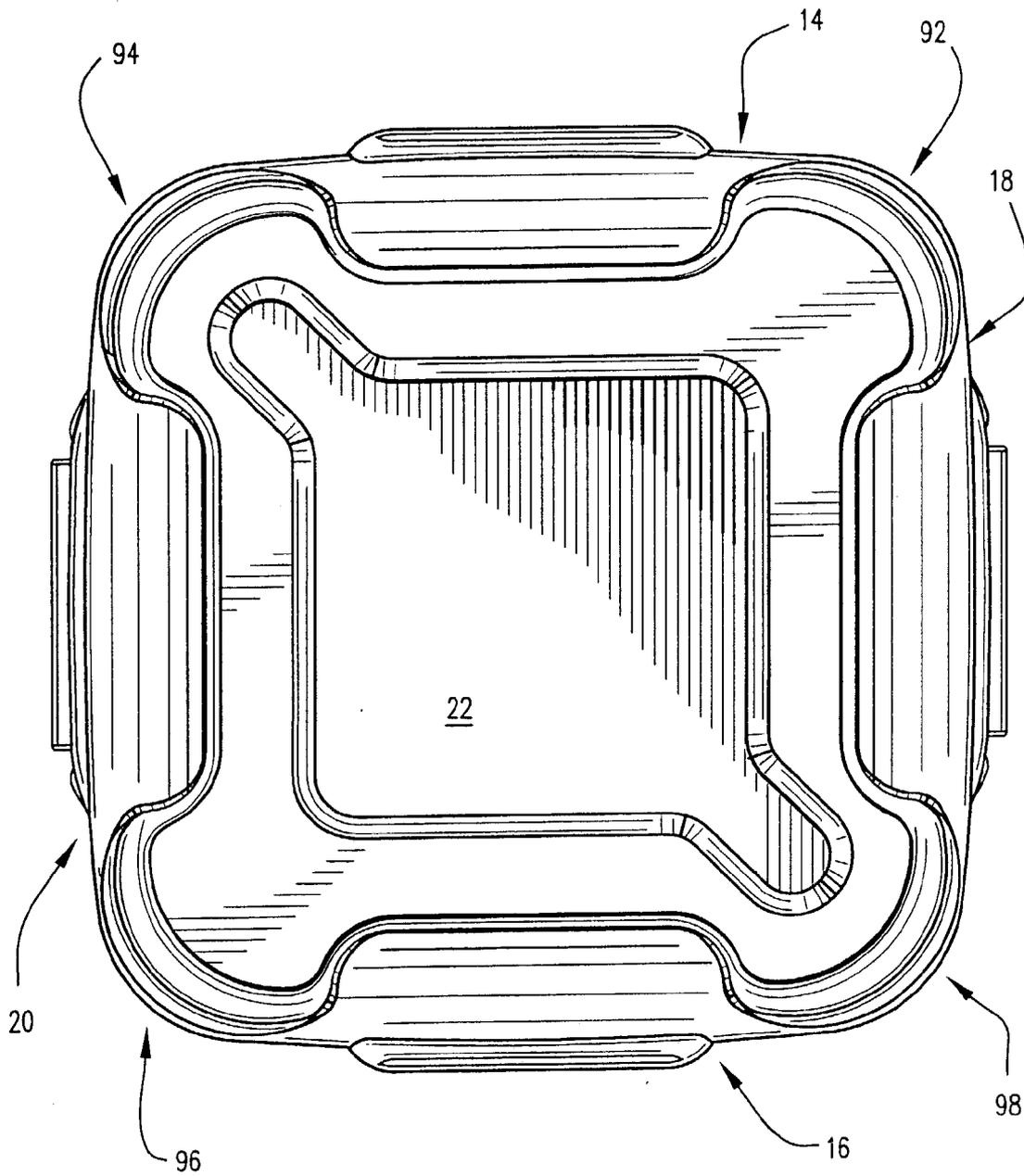


Fig.9

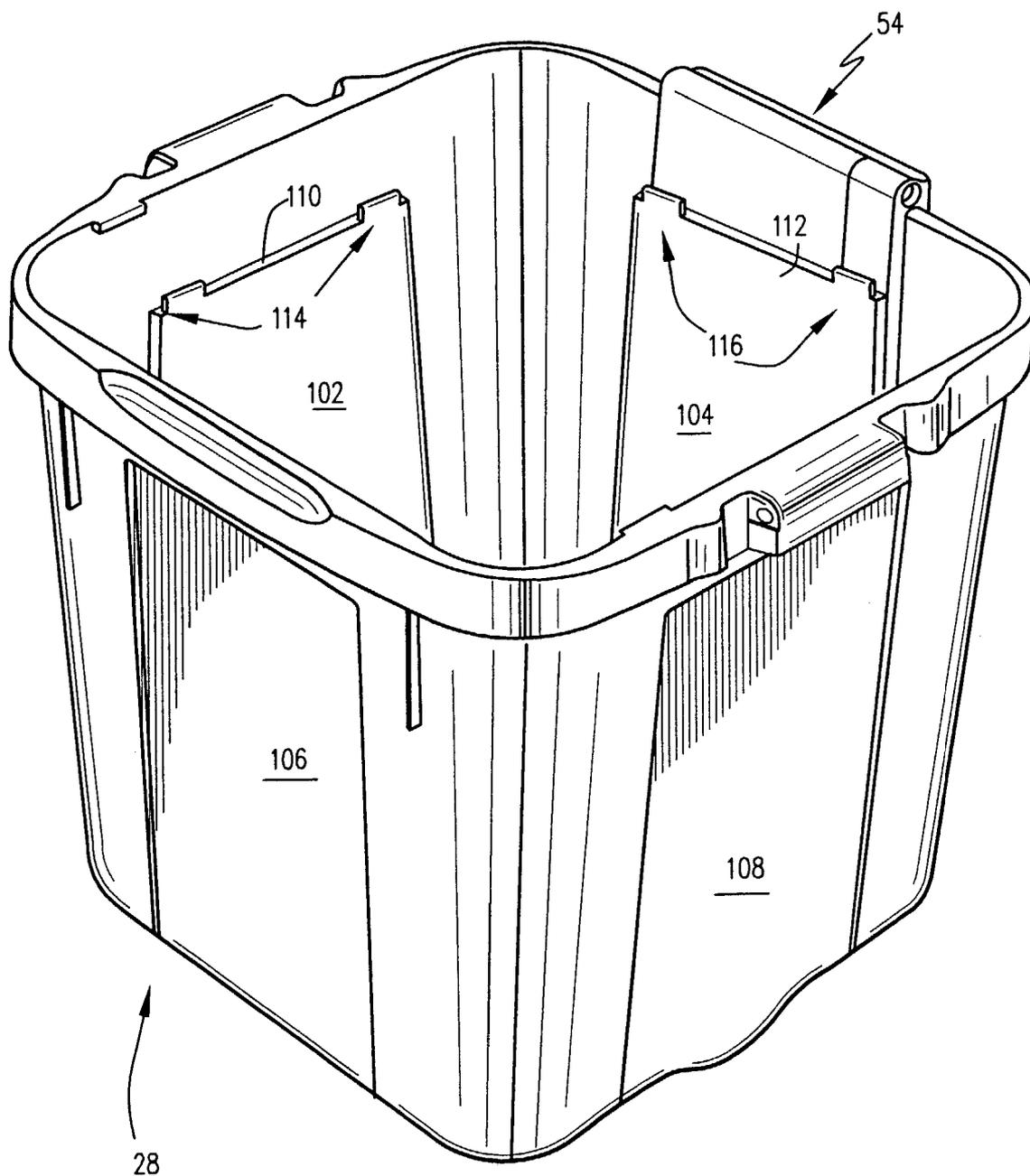


Fig.10

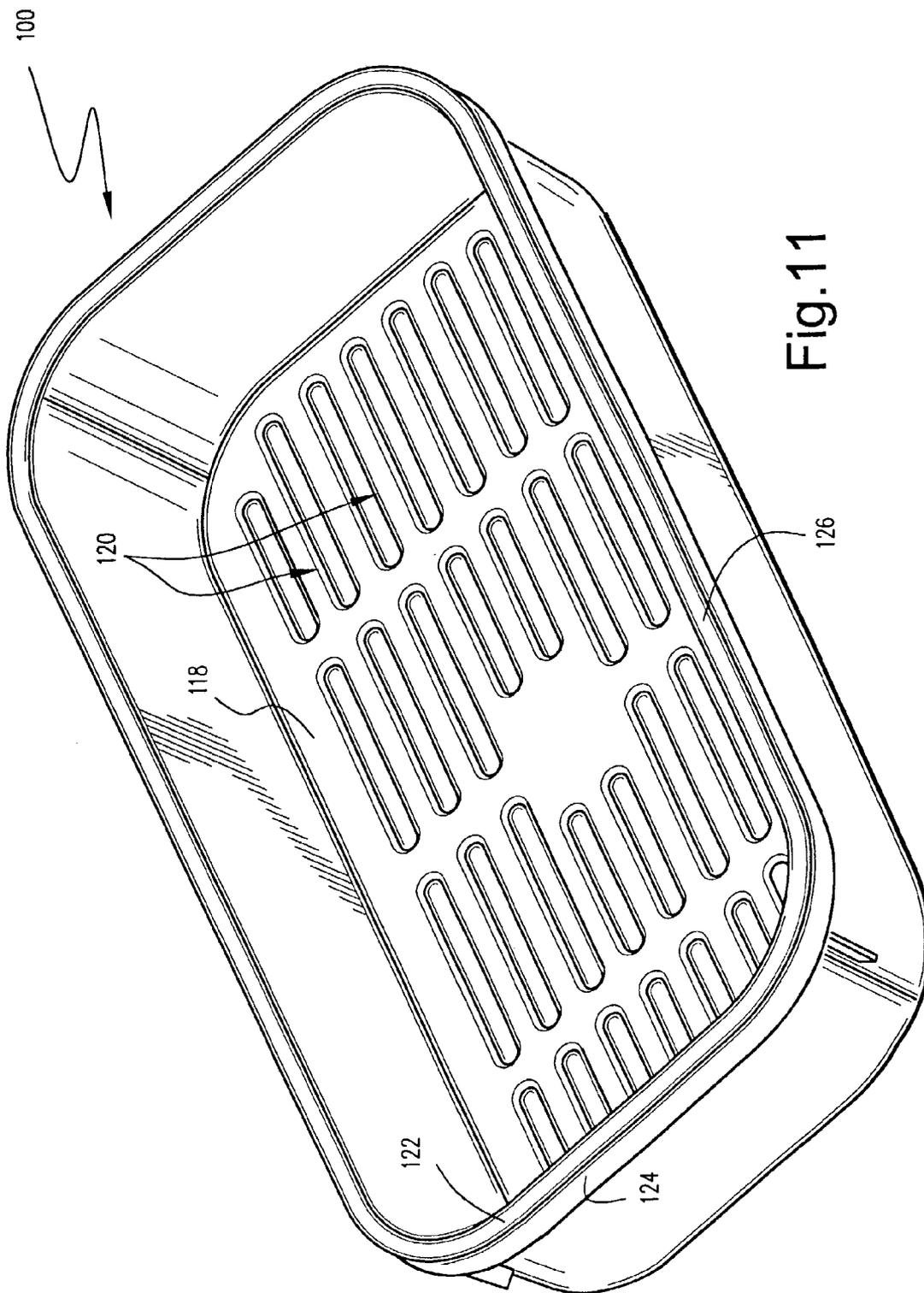


Fig. 11

## ICE CHEST

### BACKGROUND OF THE INVENTION

[0001] The present invention relates to a portable container, more particularly an ice chest or cooler for food and beverages.

[0002] Conventional coolers or ice chests are typically in the form of an insulated container body defined by four walls upstanding from a base to define a top opening to which a removable or pivotable lid is mounted. Such conventional coolers are typically rectangular with two elongated side walls and two end walls, with pivotable handles mounted to each end wall for carrying the cooler. Such ice chests have a number of disadvantages. For example, the elongated shape of conventional large, e.g., 36 or 48 quart, coolers means that the consumer must spread his arms and wrists wide to be able to grab at both handles to lift and move the cooler. This awkward stance makes lifting the cooler difficult and often the consumer will solicit aid from another individual so that one person carries each end of the cooler. Second, the elongated footprint of conventional coolers can make it difficult to store and transport, particularly in compact cars, while accommodating the consumer's other luggage or belongings. The footprint of the product is also of concern as it impacts the space required to display the product for sale.

### BRIEF DESCRIPTION OF THE INVENTION

[0003] It is an object of the invention to provide a cooler or ice chest that is uniquely shaped to be more ergonomic so that the consumer does not need to spread his arms and wrists as wide to pick up the ice chest. It is also an object of the invention to provide a cooler having a smaller footprint to facilitate storage and efficient retail display.

[0004] The foregoing objects are realized in accordance with the invention by providing an ice chest that is of generally cubical shape having a generally square transverse cross-section.

[0005] It is further object of the invention to provide an ice chest that may be more conveniently and easily picked up irrespective of the direction from which it is approached and carried. The foregoing object is realized by providing a handle on each side face of the cooler so that handles can be readily located and grasped irrespective of the orientation of the cooler with respect to the approaching consumer.

[0006] It is a further object of the invention to provide for built in storage to accommodate goods or accessories that the consumer may want to transport or store with the ice chest, but which do not require cooling. The foregoing object is achieved by providing a cooler or ice chest having at least one covered storage compartment in its lid.

[0007] It is yet a further object of the invention to provide a cooler tray within the cooler in a manner such that the tray can be placed and retained in any one of several lateral positions within the ice chest interior. This object is achieved by providing a cooler tray having a lip defined peripherally thereof for engaging corresponding tray tabs provided in the ice chest interior, for supporting the tray and holding the tray in position, so that it does not slide once positioned in the ice chest.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0008] These and other objects and advantages of this invention will be more completely understood and appreciated by careful study of the following more detailed description of the presently preferred exemplary embodiments of the invention taken in conjunction with the accompanying drawings, in which:

[0009] **FIG. 1** is a perspective view from the front right and top of an ice chest provided in accordance with a presently preferred embodiment of the invention;

[0010] **FIG. 2** is a view similar to **FIG. 1** showing the two side handles pivoted to an exemplary lift position;

[0011] **FIG. 3** is a view similar to **FIG. 1** showing the lid storage compartment cover in an open disposition;

[0012] **FIG. 4** is a view similar to **FIG. 1** showing the ice chest lid in its open position;

[0013] **FIG. 5** is a top plan view of the ice chest of **FIG. 1**;

[0014] **FIG. 6** is a perspective view of the lid compartment cover;

[0015] **FIG. 7** is a front elevational view, partly broken along lines 7-7 of **FIG. 8** of an ice chest embodying the invention;

[0016] **FIG. 8** is a side elevational view of the ice chest, partly broken away along line 8-8 of **FIG. 7**;

[0017] **FIG. 9** is a bottom plan view of the ice chest of **FIG. 1** in an exemplary embodiment of the invention;

[0018] **FIG. 10** is a perspective view of the ice chest liner of the invention illustrating the tray tabs for supporting the cooler tray;

[0019] **FIG. 11** is a perspective view of a cooler tray provided in accordance with the invention; and

[0020] **FIG. 12** is an elevational view, partly in cross-section of the cooler tray of **FIG. 11**.

### DETAILED DESCRIPTION OF THE INVENTION

[0021] An ice chest provided in accordance with the present invention is of generally cubical shape so that the ice chest has a smaller footprint than a conventional ice chest and is easier to grasp and lift.

[0022] In the illustrated embodiment, the ice chest **10** is in the form of an insulated container body **12** which has walls **14,16,18,20** upstanding from a base **22** to define a top opening **24**. For ease of description and reference, the ice chest may be characterized as having front and rear side walls **14,16** and right and left side walls **18,20**. The right and left side walls are mirror images of one another and the front and rear side walls as defined by the shell of the cooler are mirror images of one another but the top edge of the front and rear side walls as defined by the liner **28** differ to accommodate the openable lid of the cooler as described in greater detail hereinbelow. The container body **12**, as best seen in **FIGS. 7 and 8**, is comprised of an outer shell **26** and an inner liner **28** with a suitable insulating material **30** provided therebetween.

[0023] To define the generally cubical shape of the ice chest, the ice chest lid 32 and base 22 are generally square and each of the upstanding walls is generally square having a width generally equal to its height. In the illustrated embodiment, the ice chest is generally cube shaped, but not necessarily a perfect cube, as the height of the ice chest in this embodiment is slightly greater than the dimensions of each of the sides. Thus, by way of example, for a 48 quart ice chest, the dimensions of the ice chest may be  $17\frac{1}{4} \times 17\frac{1}{4} \times 17\frac{3}{16}$  inches. The corners and peripheral edges of the ice chest are generally curved or rounded to facilitate molding, to give the product a modern aesthetically pleasing appearance, and for user comfort.

[0024] Unlike conventional ice chests, in the presently preferred embodiment, the ice chest includes four handles 34,36,38,40, one handle defined on or mounted to each side wall of the ice chest. This permits the consumer to more conveniently and easily pick up and carry the ice chest from any direction in which it is approached. The cubic shape in conjunction with the handles makes this possible. In the illustrated embodiment, the handles 34,36 provided on the front and rear side walls are molded in the outer shell 26 of the ice chest. On the other hand, the handles 38,40 provided in the right and left side walls 18,20 are pivotally mounted to a suitable receptacle 42,44 defined in the liner 28 for being pivoted from a storage position, as shown in FIG. 1, to a lift and carry position, as shown in FIG. 2. In the illustrated embodiment, the liner and shell of the ice chest are molded to define a raised perimeter 46,48 for the right and left side handles 38,40, e.g., to shield the handles from potentially damaging contact with other objects when stowed. As also illustrated, e.g., in FIGS. 1-4, the cross bars of the pivotable handles 38,40 include finger recesses 50,52 to facilitate grasping of the handle and for user comfort.

[0025] In the illustrated embodiment, an integrally formed handle 34,36 is provided on the front and rear side walls 14,16, e.g., so as not to interfere with opening the lid and/or the hinge mounting of the ice chest lid. It is to be understood that if the lid is mounted without a hinge structure or is hinged to one of the side walls, then the front and rear handles may be configured as pivotal handles such as shown for the right and left sides and/or may be another pivotal or nonpivotal handle configuration as deemed necessary or desirable. Likewise, while pivotal handles that project upwardly above the lid of the ice chest are provided on the right and left sides to facilitate grasping and lifting of the ice cooler and/or for dragging the ice chest, e.g., in the sand, the handles provided on the right and left sides of the ice chest need not be provided as pivotal handles but may be vertically sliding handles or integrally formed handles as deemed necessary or desirable.

[0026] An insulating cover or lid 32 is provided to close the top opening 24 of the ice chest. In the illustrated embodiment, the lid is hingedly attached to the liner 28 of the ice chest main body 12 as at 54 to pivot from a closed position as shown in FIG. 1 to an open position, as shown in FIG. 4, to provide easy access to the ice chest interior. It is to be appreciated, however, that as an alternative to the pivotal connection shown, a fully removable lid may be provided. Also, the lid could be hingedly attached to one of the other sides of the cooler without departing from this invention.

[0027] To secure the lid in its closed position as depicted in FIG. 1, in the illustrated embodiment locking tabs 56 are defined adjacent the upper peripheral edge of the container main body liner to engage corresponding recesses 58 defined in each side of the cooler lid 32. Such a friction type locking closure is not required, however, and may be omitted. In addition, or in the alternative, other more affirmative locking structures may be provided to secure and retain the lid in its closed position, such as pivotally mounted locking carrying handles to selectively engage and hold the lid on the container, during lifting and transport, or pivoting or rotating locks provided specifically for retaining the lid in its closed position. In the illustrated embodiment, because the lid is secured in its closed position by the locking tabs 56 and corresponding recesses 58, no locking interface is provided between the pivotal handles and the lid. Rather, a cutout 60,62 is defined on the right and left side edges of the lid to facilitate rotation of the handles to a vertical disposition as shown in FIG. 2. To facilitate lifting and opening of the lid, particularly to overcome the friction locking force of the locking tabs and corresponding recesses, a lid lifting recess 64 is defined in the lid front edge. In the illustrated embodiment, a corresponding recess 66 is defined in the top edge of the liner 28 of the main body 12 to facilitate opening of the lid and for aesthetics.

[0028] The ice cooler lid 32 in the presently preferred embodiment of the invention also defines compartments for product storage. In the illustrated embodiment, first and second compartments 68,70 are provided as receptacles for a beverage can, glass or bottle. Additionally, a pivotal cover 72 is mounted to the lid 32 which may be selectively pivoted from a closed position as shown in FIG. 1 to an open position as shown in FIG. 3 to reveal interior compartments in the cooler lid. In the illustrated embodiment, first and second compartments 74,76 are defined in the lid which may receive cellular phones, car keys, change and the like. The compartments may be defined in a removable tray insert or may be integrally formed in the ice chest lid.

[0029] In the illustrated embodiment, the lid or cover for the compartment pivots to slightly beyond 90° such as 100 or 110° so that the cover will stay open while the compartment(s) are accessed, without precluding placement of a bottle, can or glass in the beverage receptacles 68,70. In the illustrated embodiment, the compartment cover is snapped shut by the engagement of cover tabs 78 and corresponding receptacles (not shown). A recess 80 is defined in the lid 72 and a projecting tongue 82 in the cover 72 to facilitate gripping and lifting of the lid so as to overcome the snap-lock frictional closure afforded by the container cover tabs 78.

[0030] A recess 84 is also defined peripherally of a compartments 74,76 so that when the compartment cover 72 is in its closed position, the peripheral surface 86 of the compartment tray engages or is closely adjacent the inner surface of the compartment cover 72 so as to close and isolate each of the compartments 74,76. Because the cover snaps shut, it will retain contents in the respective compartments even when the ice chest lid is disposed in its open orientation as shown in FIG. 4. As illustrated in FIG. 4, a recess or pocket 90 is defined in the ice chest lid 32 inner surface which provides added height to the storage compartment of the ice chest. As will be appreciated, such a

pocket or recess is not provided in the forward section of the lid due to the presence of the accessory compartments 74,76.

[0031] As illustrated in particular in FIGS. 3, 7, 8 and 9, the bottom 22 of the ice chest 10 has a flared foot 92,94, 96,98 at each of its four corners. The flared feet provide greater stability and more cold retention capability for the ice chest. In this regard, the flared feet effectively define a recess in the bottom wall of the ice chest as they space the bottom surface of the ice chest main body 12 from the support surface on which the ice chest is disposed.

[0032] In addition to the ergonomic advantages, facilitated by the new handle configuration, the cube shape of the ice chest also reduces the foot print of the product which facilitates storage, and placement in compact vehicles, e.g., smaller, deeper compact vehicle trunks. The reduced product footprint is also of importance to retailers. In that regard, for example, for a 48 quart cooler, a cubic ice chest as provided in accordance with the invention has a 25% smaller footprint on a retail shelf than does a 48 quart ice chest of standard rectangular configuration. The reduced footprint is a desirable feature to retailers who can display more products for resale.

[0033] In accordance with a further feature of the invention, a unique cooler tray 100 is accommodated and held within the liner 28 of the ice chest main body 12 such that it will not slide back and forth within the ice chest. More specifically, with reference to FIG. 10, the liner 28 of the illustrated ice chest is formed to include raised panels 102,104 in the interior surface of the four side walls. The liner is correspondingly recessed as at 106,108 in the outer surface of the liner structure. The panel projections 102,104 define an upward facing ledge 110,112 for seating a tray. In the illustrated embodiment, tray tabs 114,116 are defined to project upwardly from the inner most face of the protruding panels, beyond the respective ledge 110, 112. These tabs hold the cooler tray 100 in position as described in greater detail below.

[0034] An ice cooler tray 100 in accordance with an exemplary embodiment of the invention is illustrated in FIGS. 4, 11 and 12. As illustrated, the tray is generally rectangular having curved corners. The bottom 118 of the tray is perforated as at 120 so that any fluids such as from melted ice will not be retained in the tray and the contents of the tray can remain relatively dry, suspended above the lower portion of the ice chest interior. The curvature of the corners of the tray and its length are such that the curved corners can be accommodated in the curved interior corners of the ice chest as shown in FIG. 4. The rectangular tray is constructed and arranged so that it will fit within the liner 28 either front to rear or side to side (as shown in FIG. 4) This is possible due to the square shape of the ice chest interior. Meanwhile, as illustrated in FIG. 12, the upper peripheral edge of the tray defines a peripheral surface 122 and a downwardly depending lip or flange 124,126.

[0035] The lip or flange 124, 126 is sized so as to be received between the tray tabs 114,116 of the ice chest liner and the respective side wall of the liner. Thus, for example, when the tray is seated within the main body 12 of the ice chest, as shown in FIG. 4, the lip 126 of the long side of the tray 100 will be seated on the ledge 112 of the liner and the tray tabs 116 will limit the amount by which the tray may shift towards the front side 14 of the ice chest. Similarly, the

lip or flange 124 provided along the short side of the tray will engage one of the two tray tabs 114 defined on the right and left side faces of the liner to support and hold the tray in position in a like manner. In the same way, the tray can be mounted to extend front to back along either the right or left sides 18,20 of the ice chest. Furthermore, in the illustrated embodiment, the tray tabs 114 provided on the right and left side walls are provided and spaced apart so that they can both be received under the peripheral lip 124 of the tray so that the tray can straddle the right to left side walls. Tabs 116 are similarly spaced so the tray can straddle the ice chest front to rear, so that ultimately the tray has four possible positions within the cooler: two front to back positions and two right to left or left to right positions. Thus, an advantage of providing a cooler tray and tray tabs, as illustrated and described hereinabove, is that a variety of tray positions can be accommodated while unintended lateral shifting of the tray will not occur.

[0036] While the invention has been described in connection with what is presently considered to be the most practical and preferred embodiment, it is to be understood that the invention is not to be limited to the disclosed embodiment, but on the contrary, is intended to cover various modifications and equivalent arrangements included within the spirit and scope of the appended claims.

What is claimed is:

1. A container comprising:

a main body having a base wall and four side walls extending from said base wall so as to define a product receiving compartment, each of said walls comprising an insulating material, each of said side walls having an outer surface and an inner surface with respect to said compartment and each of said side walls having an upper edge, said upper edges together defining a top opening of said main body;

a lid for selectively closing said top opening of said main body; and

a manually engageable handle at least one of defined in and mounted to each said side wall whereby the main body may be lifted by grasping the handles of opposed side walls thereof.

2. A container as in claim 1, wherein said main body is defined by an outer shell having a base wall and four side walls integrally formed and a liner comprised of a respective base wall and side walls integrally formed, said liner being received within said shell and wherein said insulating material substantially fills a space between said liner and said shell.

3. A container as in claim 1, wherein said main body is generally square in cross-section such that each of said side walls is of generally equal width.

4. A container as in claim 3, wherein a height defined by said main body with the lid mounted thereto generally corresponds to a width of each said side wall.

5. A container as in claim 1, wherein said lid is hingedly attached to one of said side walls.

6. A container as in claim 1, wherein said handles of one opposed pair of said side walls are pivotally mounted to said respective sides.

7. A container as in claim 6, wherein each said pivotable handle is U-shaped including a cross bar and first and second

legs, and wherein said cross bar includes a plurality of finger receiving recesses to facilitate grasping of said handle.

**8.** A container as in claim 1, wherein said handles of one opposed pair of said side walls are formed and disposed so as to be fixed with respect to said side walls.

**9.** A container as in claim 1, further comprising a storage compartment defined within said lid and a pivotable cover pivotally attached to the lid so as to selectively close said storage compartment.

**10.** A container as in claim 9, further comprising locking tabs provided on one of said cover and said lid for engaging recesses provided on the other of said cover and said lid for holding said cover in a closed position closing said storage compartment.

**11.** A container as in claim 1, each wherein said base wall of said main body comprises four flared feet, one provided at each corner of said main body.

**12.** A container as in claim 11, further comprising a recess in said base wall of said main body, whereby said flared feet space the recessed bottom surface from a support surface of said container.

**13.** A container as in claim 1, further comprising a tray removably seated within said ice chest.

**14.** A container as in claim 13, wherein said tray comprises a base and a peripheral wall, a top peripheral edge of said peripheral wall defining a downwardly depending lip.

**15.** A container as in claim 14, further comprising a ledge defined in the interior surface of at least two of the side walls of the cooler for receiving and supporting said peripheral lip of said tray.

**16.** A container as in claim 15, further comprising a tray tab projecting upwardly from each said ledge for engaging a recess defined between said downwardly depending lip and said peripheral wall of the tray.

**17.** A container as in claim 16, wherein first and second tray tabs project upwardly adjacent each said ledge.

**18.** A container as in claim 15, wherein a ledge is defined along a portion of each side wall of the ice chest so that the tray can be supported adjacent and along each of the four side walls of the ice chest.

**19.** A container as in claim 18, further comprising first and second tray tabs projecting upwardly from each said ledge for engaging a recess defined between said downwardly depending lip and said peripheral wall of the tray.

**20.** A container comprising:

a main body having a base wall and four side walls extending from said base wall so as to define a product receiving compartment, each of said walls comprising an insulating material, each of said side walls having an outer surface and an inner surface with respect to said compartment and each of said side walls having an upper edge, said upper edges together defining a top opening of said main body; and

a lid for selectively closing said top opening of said main body;

wherein said main body is defined by an outer shell having a base wall and four side walls integrally formed and a liner comprised of a respective base wall and side walls integrally formed, said liner being received within said shell and wherein said insulating material substantially fills a space between said liner and said shell, and

wherein said main body is generally square in cross-section such that each of said side walls is of generally equal width.

**21.** A container as in claim 20, further comprising a manually engageable handle at least one of defined in and mounted to each said side walls whereby the main body may be lifted by grasping the handles of opposed side walls thereof.

**22.** A container as in claim 20, wherein said lid is hingedly attached to one of said side walls.

**23.** A container as in claim 21, wherein said handles of a one opposed pair of said side walls are pivotally mounted to said respective sides.

**24.** A container as in claim 23, wherein each said pivotable handle is U-shaped including a cross bar and first and second legs, and wherein said cross bar includes a plurality of finger receiving recesses to facilitate grasping of said handle.

**25.** A container comprising:

a main body having a base wall and four side walls extending from said base wall so as to define a product receiving compartment, each of said walls comprising an insulating material, each of said side walls having an outer surface and an inner surface with respect to said compartment and each of said side walls having an upper edge, said upper edges together defining a top opening of said main body;

a lid for selectively closing said top opening of said main body; and

a storage compartment defined within said lid and a pivotable cover pivotally attached to the lid so as to selectively close said storage compartment.

**26.** A container as in claim 26, further comprising locking tabs provided on one of said cover and said lid for engaging recesses provided on the other of said cover and said lid for holding said cover in a closed position closing said storage compartment.

**27.** A container comprising:

a main body having a base wall and four side walls extending from said base wall so as to define a product receiving compartment, each of said walls comprising an insulating material, each of said side walls having an outer surface and an inner surface with respect to said compartment and each of said side walls having an upper edge, said upper edges together defining a top opening of said main body;

a lid for selectively closing said top opening of said main body;

a tray removably seated within said ice chest, wherein said tray comprises a base and a peripheral wall, a top peripheral edge of said peripheral wall defining a downwardly depending lip;

a ledge defined in the interior surface of at least two of the side walls of the cooler for receiving and supporting said peripheral lip of said tray; and

a tray tab projecting upwardly from each said ledge for engaging a recess defined between said downwardly depending lip and said peripheral wall of the tray.

**28.** A container as in claim 27, wherein first and second tray tabs project upwardly adjacent each said ledge.

**29.** A container as in claim 27, wherein a ledge is defined along a portion of each side wall of the ice chest so that the tray can be supported adjacent and along each of the four side walls of the ice chest.

**30.** A container as in claim 29, further comprising first and second tray tabs projecting upwardly from each said ledge for engaging a recess defined between said downwardly depending lip and said peripheral wall of the tray.

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