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(54) **STORAGE BIN ORGANIZER**

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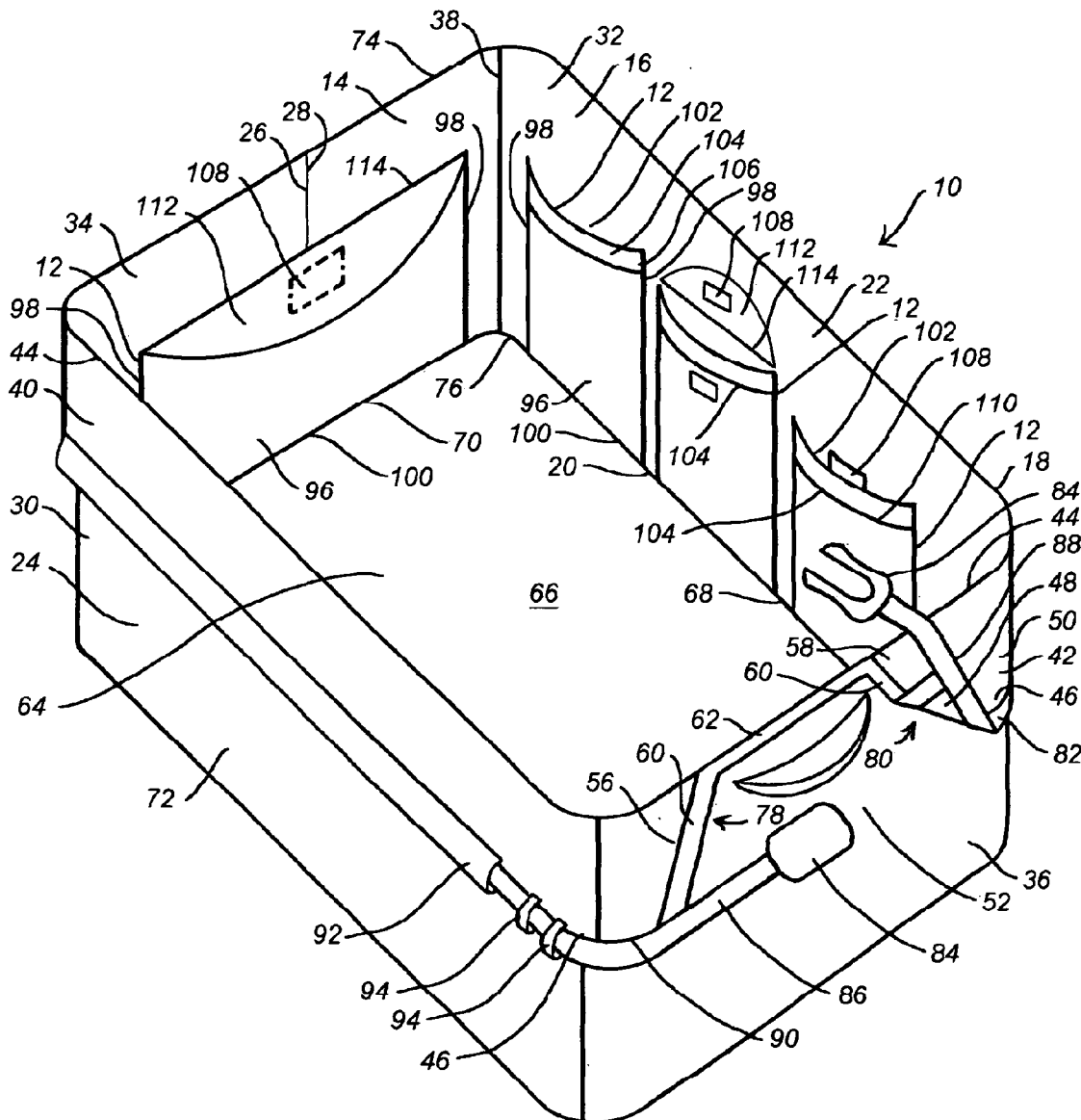
(57) **ABSTRACT**

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A storage bin organizer device formed with a flexible inner wall with an upper margin defining a substantially rectangular opening into the organizer device. The storage bin organizer device also includes flexible outer walls each joined to the upper margin of the inner wall on opposite sides of the opening and being spaced apart at either end of the rectangular opening. A flexible floor is joined to a lower margin of the inner wall. A flexible belt interconnects the outer walls. Also, several pockets are formed on the interior surface of the inner wall, each of the pockets having a mouth opening therinto on the interior surface of the inner wall.

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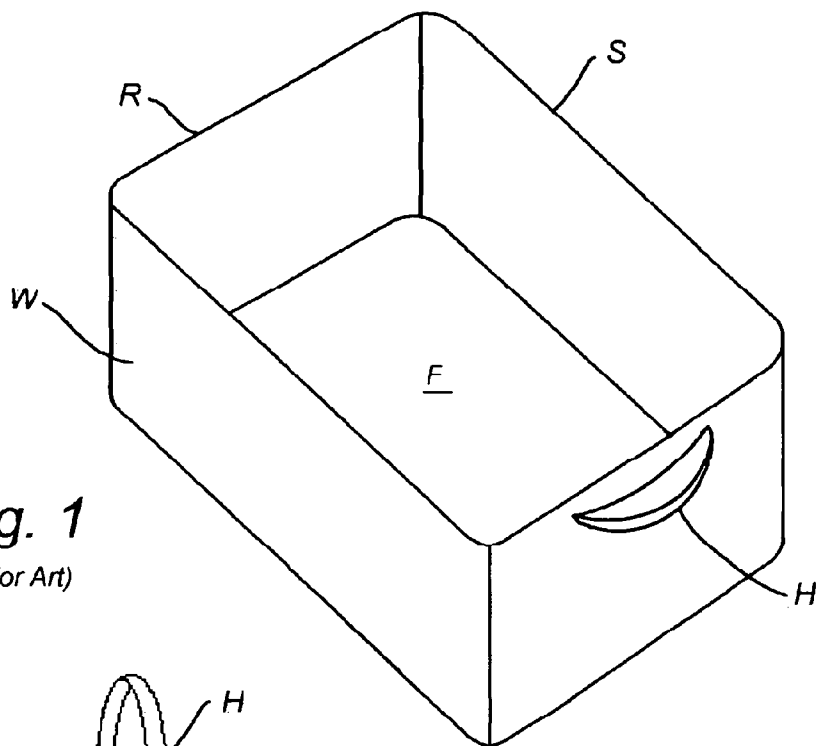


Fig. 1
(Prior Art)

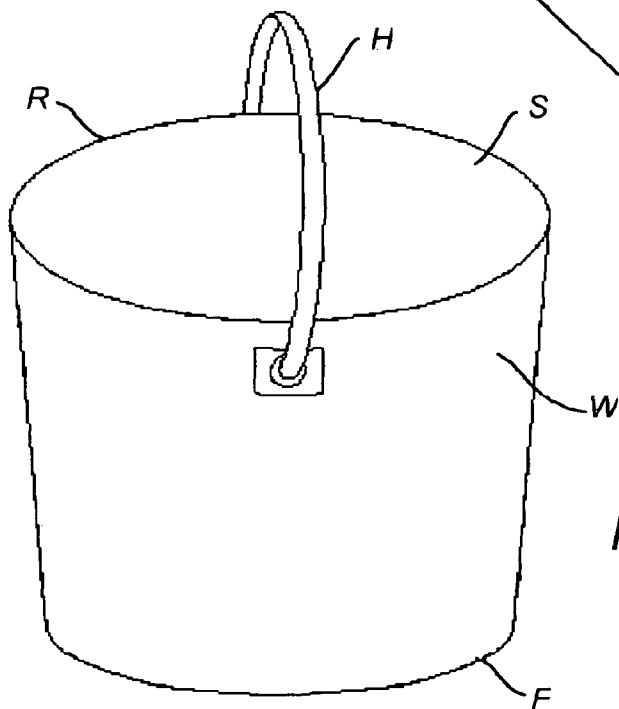


Fig. 4
(Prior Art)

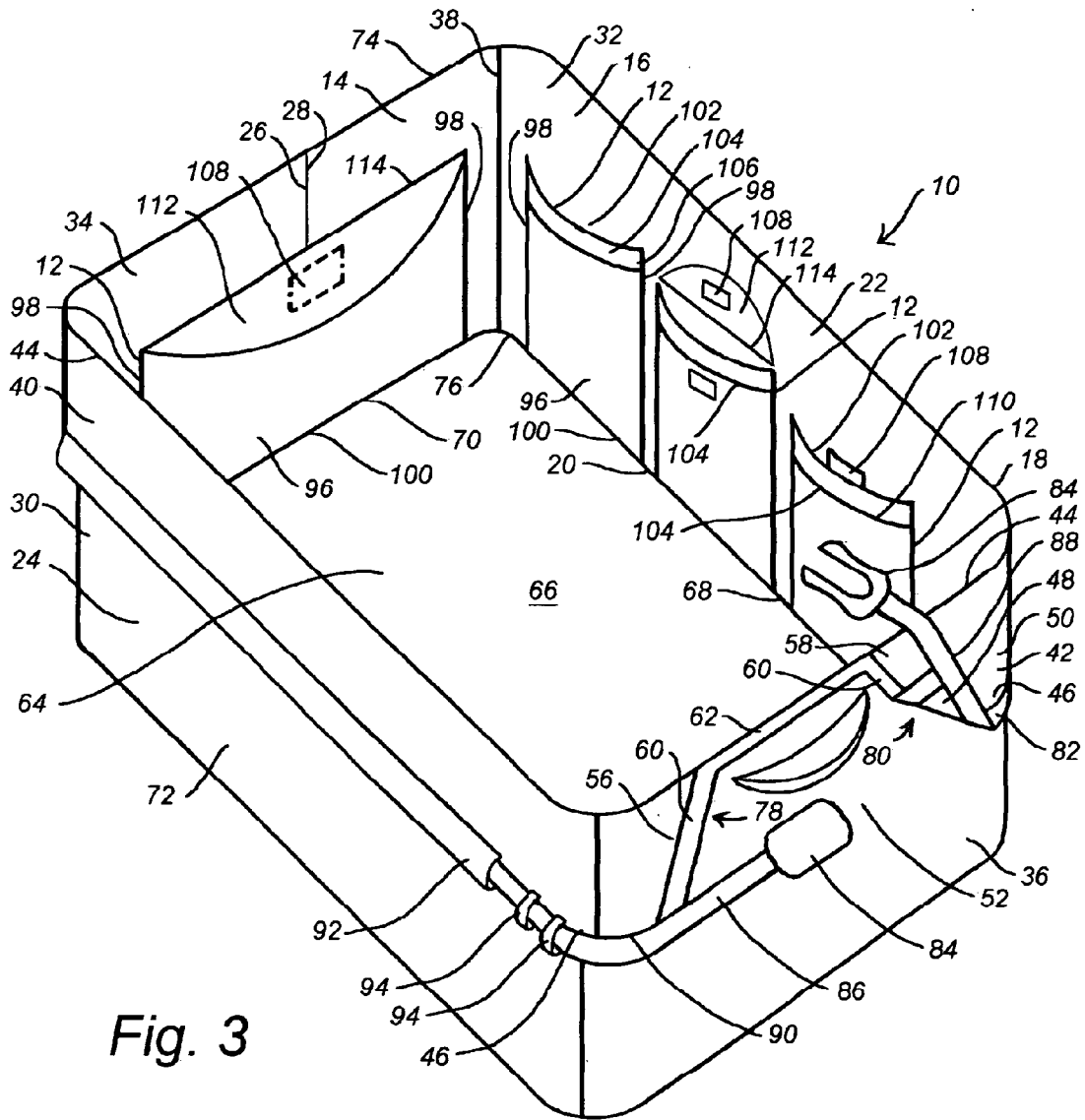


Fig. 3

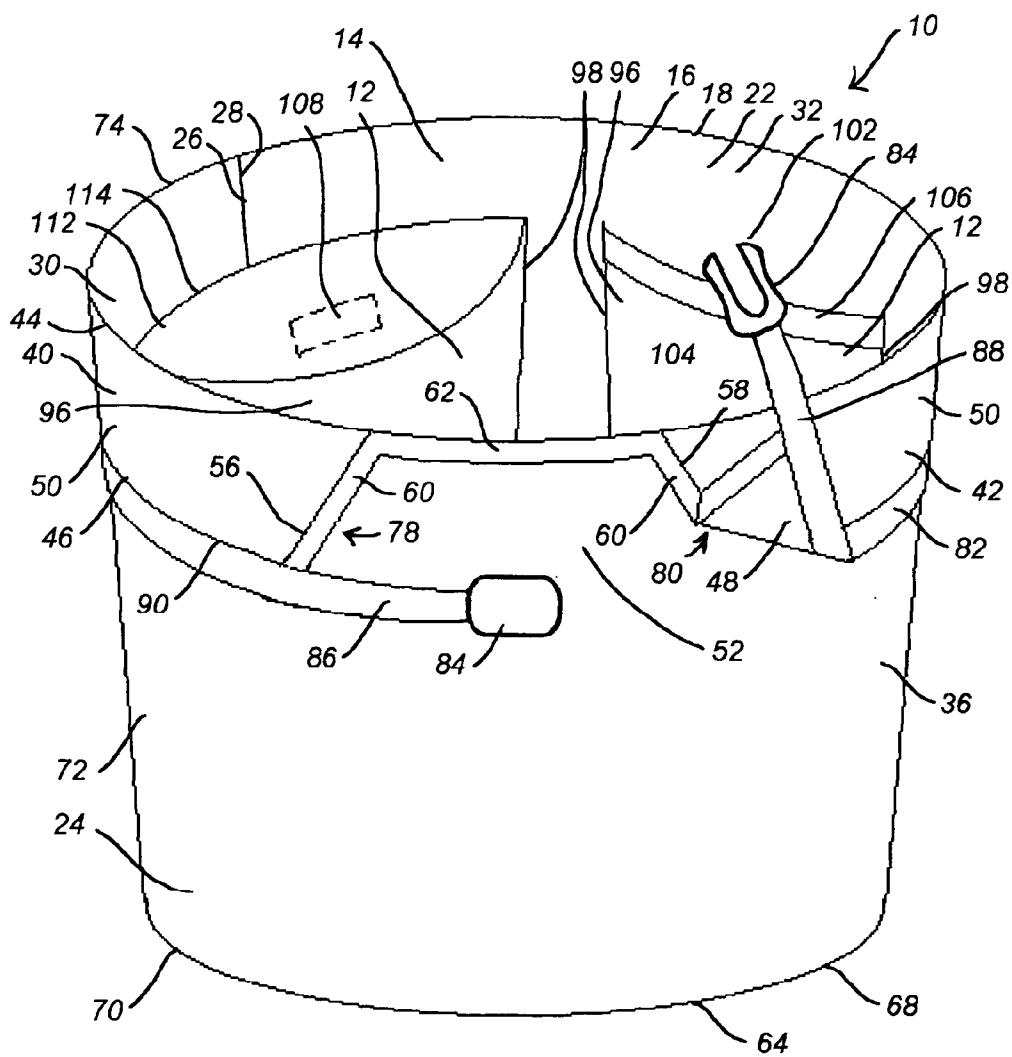


Fig. 5

STORAGE BIN ORGANIZER

FIELD OF THE INVENTION

[0001] The present invention relates generally to organizer devices for storage bins and the like, and in particular to collapsible storage bin organizer devices having one or more interior pockets.

BACKGROUND OF THE INVENTION

[0002] FIG. 1 illustrates by example and without limitation a substantially square or rectangular plastic storage bin S having a deep well formed by four outside walls W and a floor F. Such storage bins S are generally well-known and commercially available from several well-known manufacturers. The storage bin S may include a pair of handles H accessible on the outside of walls W near an upper rim R. The handles H are usually positioned at opposite ends when the storage bin S is rectangular in shape. However, the storage bin S may have a round bucket shape.

[0003] Such plastic storage bins S are generally well known.

[0004] However, known storage bin apparatus are limited in their ability to store smaller items efficiently. Rather, the tub or bucket construction of most known storage bins limits their use to merely piling one item atop another so that retrieval of a specific item is difficult and may require emptying the entire contents of the bin to retrieve a single item.

SUMMARY OF THE INVENTION

[0005] The present invention is a storage bin organizer device receivable into a storage bin container having an exterior wall and an interior wall which is generally rectangular in cross section at any point, the walls terminating in an upper rim portion with handles in the either end wall.

[0006] According to one aspect of the invention, the storage bin organizer device of the invention is formed with a flexible inner wall having an upper margin and a lower margin and an interior surface therebetween, the upper margin defining a substantially rectangular opening thereinto. The storage bin organizer device also includes first and second flexible outer walls each having an upper margin and a lower margin, and respective first and second edge margins intervening between the upper and lower margins, the first and second edge margins being spaced apart. The upper margin of the first and second outer walls are joined to the upper margin of the inner wall on opposite sides of the opening; and a flexible floor having an edge margin that is joined to the lower margin of the inner wall. A flexible belt interconnects the lower margins of the first and second outer walls. Also, several pockets are formed on the interior surface of the inner wall, each of the pockets having a mouth opening thereinto that is positioned between the upper and lower margins of the interior surface of the inner wall and substantially aligned therewith.

[0007] According to another aspect of the invention, the belt is further coupled to the first and second outer walls between both the spaced apart first and second outer walls, the being formed for example as a pair of cooperating belts each coupled to a respective one of the first and second spaced apart first and second outer walls; and a belt coupler is operable between the pair of cooperating belts.

[0008] According to another aspect of the invention, one or more of the pockets is formed with an elasticized opening thereinto.

[0009] According to another aspect of the invention, one or more of the pockets includes a closure mechanism that is structured for closing an opening thereinto.

[0010] According to another aspect of the invention, a movable flap closure may be provided adjacent to an opening into one or more of the pockets. Furthermore, a fastener may be provided between the movable flap closure and a surface of the pocket adjacent to the opening thereinto. The fastener is for example selected from a button-and-hole fastener, a snap fastener, a belt-and-buckle fastener, and a fabric hook-and-loop fastener.

[0011] Other aspects of the invention are detailed herein.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] The foregoing aspects and many of the attendant advantages of this invention will become more readily appreciated as the same becomes better understood by reference to the following detailed description, when taken in conjunction with the accompanying drawings, wherein:

[0013] FIG. 1 is a perspective view showing an example of a substantially square or rectangular plastic storage bin of the deep well variety as are generally well-known and commercially available;

[0014] FIG. 2 is a perspective view that illustrates the present invention by example and without limitation as a collapsible soft-sided fabric storage bin organizer device in use with the substantially square or rectangular plastic storage bin illustrated in FIG. 1;

[0015] FIG. 3 is a perspective view that illustrates the present invention by example and without limitation as the collapsible soft-sided fabric storage bin organizer device illustrated in FIG. 2;

[0016] FIG. 4 is a perspective view showing an example of a substantially round plastic bucket of the deep well variety as are generally well-known and commercially available; and

[0017] FIG. 5 is a perspective view that illustrates the present invention by example and without limitation as a collapsible soft-sided fabric storage bin organizer device for use with the substantially round plastic bucket illustrated in FIG. 4.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

[0018] In the Figures, like numerals indicate like elements.

[0019] FIG. 2 illustrates the present invention by example and without limitation as a collapsible soft-sided fabric storage bin organizer device 10 for use with a substantially square or rectangular plastic storage bin S of the deep well variety as are generally well-known and commercially available from several well-known manufacturers. Handles H may be provided near an upper rim R on the outside of walls W of the storage bin S, usually positioned at opposite ends when the storage bin S is rectangular. However, the bin organizer 10 is optionally structured to instead accommodate a storage bin S having a round bucket shape without departing from the scope and intent of the invention.

[0020] FIG. 3 illustrates by example and without limitation the bin organizer 10 of the invention as a soft sided bin liner formed of a durable fabric that is weather resistant for

outdoor use, such as a heavy duty, sturdy woven cloth or canvas or leather material. For example, one such material is manufactured under the brand name Sunbrella® by Glen Raven, Incorporated of Glen Raven, N.C. The fabric construction of the bin organizer 10 allows it to be collapsed for storage in a relatively small space when not in use. The fabric construction also allows the bin organizer 10 to conform to a variety of different size storage bins S by folding to fit smoothly into smaller bins. The plastic storage bin S provides stiffening support for the pliant fabric bin organizer 10, including lateral stiffening support for pockets 12 provided within an interior space 14 of the bin organizer 10.

[0021] The bin organizer 10 is constructed by example and without limitation having a substantially continuous pliant fabric inner wall 16 having both an upper margin 18 and a lower margin 20 with substantially continuous interior and exterior surfaces 22 and 24 therebetween. The substantially continuous inner wall 16 is optionally formed as a single unitary piece of the durable fabric with opposite ends sewn, glued or otherwise joined along respective edges 26 and 28 to form a substantially continuous band of the fabric. Alternatively, the substantially continuous inner wall 16 is formed of two or more opposing side panels 30 and 32 with opposing end panels 34 and 36 joined along corner joints 38 to form the substantially continuous fabric band.

[0022] Two substantially continuous pliant fabric outer walls 40 and 42 are each formed having both an upper margin 44 and a lower margin 46 with substantially continuous interior and exterior surfaces 48 and 50 therebetween. Each of the outer walls 40, 42 is optionally formed as a single unitary piece of out the durable fabric, with each of the outer walls 40, 42 being slightly less than about one half the length of the continuous band that is the inner wall 16. With the interior surface 48 of each outer wall 40, 42 facing the exterior surface 24 of the inner wall 16, the upper margins 44 of each outer wall 40, 42 is sewn, glued or otherwise joined to the to the upper margin of the inner wall 16 with a space 52 between respective outer wall edges 56 and 58 that provide access to handles H on the outside of the storage bin S, for example positioned at opposite ends when the storage bin S is rectangular. Edge reinforcement 60 is optionally provided along the respective spaced apart outer wall edges 56, 58, for example, as substantially continuous strips of conventional binding tape sewn, glued or otherwise joined to the edges 56, 58. Optionally, an additional portion of edge reinforcement 62 is provided along the upper margin 18 of the fabric inner wall 16 in the space 52 between respective outer wall edges 56 and 58. The additional portion of edge reinforcement 62 stiffens the fabric to avoid gapping along the top edge of the storage bin S.

[0023] A substantially continuous pliant fabric floor panel 64 is formed having a substantially continuous interior surface 66 surrounded by a continuous edge margin 68. The substantially continuous floor panel 64 is optionally formed as a single unitary piece of out the durable fabric. The continuous edge margin 68 of the fabric floor panel 64 is joined to the lower margin 20 of the inner wall 16 in a substantially continuous manner such as by sewing, gluing, welding, or another substantially continuous joining method that forms a substantially continuous seam 70 therebetween. Joining the fabric floor panel 64 to the lower margin 20 of the inner wall 16 causes the inner wall 16, including the upper margin 18, to assume substantially the shape as the

floor panel 64. Consequently, the interior space 14 is formed between the opposing interior surfaces 22 of the inner wall 16 with the exterior surface 24 forming an exterior surface 72 of the interior space 14. The interior space 14 is closed at the lower margin 20 by the floor panel 64 joined thereto, and the joined upper margin 18 of the inner wall 16 and upper margin 44 of the outer walls 40, 42 together form an opening 74 into the interior space 14.

[0024] When the fabric floor panel 64 is formed in a square, rectangular or circular shape that matches the shape of the intended storage bin S, the inner wall 16 and upper margin 18 both assume a substantially matching square, rectangular or circular shape when joined thereto. Consequently, the interior space 14 and the opening 74 therein also assume substantially matching square, rectangular or circular shapes and thus match the shape of the storage bin S. Furthermore, corners 76 of the substantially rectangular fabric floor panel 64 are optionally rounded to conform more closely to the rounded interior corners typical of a molded plastic storage bin S.

[0025] The pliant fabric outer walls 40, 42 fold against the exterior surface 72 of the interior space 14 along the opening 74 therein with the interior surfaces 48 of the pliant fabric outer walls 40, 42 facing the exterior surfaces 24 of the inner wall 16. Two folds 78 and 80 are thus formed along the opening 74 into the interior space 14 between the interior surfaces 48 of the outer walls 40, 42 and the cavity's exterior surface 72. The folds 78, 80 each conform to the interior space 14 and the opening 74 therein also assume substantially square, rectangular or circular shape assumed by them. The folds 78, 80 thus each conform to the substantially square, rectangular or circular shape of the storage bin S. Furthermore, the pliant nature of the fabric inner wall 16 and outer walls 40, 42 permits the folds 78, 80 to conform more closely to the rounded corners typical of a molded plastic storage bin S.

[0026] A plastic, leather or fabric belt 82 is provided for interconnecting the lower margins 46 of the first and second outer walls 40, 42 around the outside of the storage bin S. Additionally, the belt 82 optionally includes a coupler 84 between two cooperating end portions 86 and 88. For example, the coupler 84 is a metal or plastic buckle of conventional design, such as a plastic buckle having a snap fastener. The buckle coupler 84 joins the two belt end portions 86, 88 for example in the vicinity of the handles H on the outside of the storage bin S. Else, the two end portions 86, 88 of the belt 82 are tied or otherwise joined without the intervening buckle coupler 84. The end portions 86, 88 of the belt 82 are adjustable in length such that, when the buckle coupler 84 is fastened, the belt 82 gathers the lower margins 46 of the first and second outer walls 40, 42 snugly around the outside of the storage bin S.

[0027] The belt 82 is joined to the lower margin 46 of each of the fabric outer walls 40, 42 in a substantially continuous manner such as by a sewn, glued, welded joint 90, or another substantially continuous joining method. Alternatively, the belt 82 is joined to the lower margin 46 of each of the fabric outer walls 40, 42 by threading through a long pocket 92 or a quantity of loops 94 provided at intervals along the lower margin 46 of each of the fabric outer walls 40, 42. The belt 82 is optionally joined to the edge reinforcement 60, when present, that is optionally provided along the respective spaced apart edges 56, 58 of the of each of the fabric outer walls 40, 42, which constrains the fabric outer walls 40, 42

in the vicinity of the handles H on the outside of the storage bin S. For example, the belt 82 is optionally sewn, glued, welded or otherwise joined to the edge reinforcement 60.

[0028] A quantity of durable fabric pockets 12 is provided on the interior 14 of the bin organizer 10. The pockets 12 are formed of substantially continuous generally rectangular panels 96 of the same weather resistant fabric as the inner wall 16, outer walls 40, 42 and fabric floor panel 64, such as a heavy duty, sturdy woven cloth or canvas or leather material. The single unitary pocket panels 96 are joined to the interior surfaces 22 of the inner wall 16 along respective side and bottom edges 98 and 100 to form a substantially continuous seal. For example, the pocket panels 96 are sewn, glued or otherwise joined to the interior surfaces 22 of the inner wall 16. The pocket panels 96 are positioned with their bottom edges 100 adjacent to lower margin 20 of the inner wall 16, and may be sewn into the seam 70 with the floor panel 64. The side edges 98 of the pocket panels 96 are substantially aligned with the corner joints 38, if present, of the inner wall 16 such that a pocket mouth opening 102 is formed along a top edge 104 of the pocket panel 96 oriented substantially parallel with the upper and lower margins 18, 20 of the inner wall 16 and the upper rim R of the storage bin S.

[0029] One or more of the pocket panels 96 may be optionally folded or gathered along its bottom edge 100 so as to form a bucket-shaped pocket 12 with the mouth 102 being a wide opening thereinto, rather than the envelope-shape normally achieved by sewing the pocket panel 96 flat against the interior surface 22. Alternatively, one or more of the pocket panels 96 may be optionally pie or wedge-shaped with the bottom edge 100 being a narrower portion and the side edges 98 spreading wider, such that the pocket 12 is wider toward the pocket mouth 102. When the wedge-shaped pocket panel 96 is joined to the interior surface 22 with the side edges 98 substantially parallel, the pocket 12 is an accordion-shape with the pocket mouth 102 being wider than the bottom edge 100.

[0030] Optionally, the top edge 104 of the pocket panel 96 of one or more of the pockets 12 may include a collapsing mechanism 106 whereby the pocket mouth 102 of the pocket 12 may be collapsible (shown for one pocket 12). The collapsing mechanism 106 is, for example, an elastic band joined to the top edge 104 of the pocket panel 96. Alternatively, the collapsing mechanism 106 is a drawstring operable along the top edge 104 of the pocket panel 96. Alternatively, the pocket mouth 102 is closable by a closure mechanism 108 such as button-and-button hole fastener, a snap fastener, a belt-and-buckle fastener, or a fabric hook-and-loop fastener tape of a type well-known by the commercial name Velcro® (shown for one pocket 12). Optionally, an edge reinforcement 110 such as substantially continuous strips of conventional binding tape is sewn, glued or otherwise joined along the top edge 104 of the pocket panel 96 in combination with the closure mechanism 108. Alternatively, a flap closure 112 is provided for one or more of the pockets 12 (shown for 2 pockets 12). For example, the flap closure 112 is provided as a small substantially continuous panel of the same weather resistant fabric as the pocket panels 96, such as a heavy duty, sturdy woven cloth or canvas or leather material. A folding edge 114 of the single unitary flap closure panels 112 is joined to the interior surfaces 22 of the inner wall 16 adjacent to the top edge 104 of the pocket panel 96 to form a substantially

continuous joint. For example, the flap closure panels 112 are sewn, glued or otherwise joined to the interior surfaces 22 of the inner wall 16 in a position adjacent to the pocket mouth 102. One of the closure mechanisms 108 is provided between the pocket panel 96 and the flap closure 112 for securing the flap closure 112 over the pocket mouth 102. The pockets 12 are provided on the interior surface 22 of the inner walls 16 such that the respective mouth openings 102 and optional flap closures 112, if present, are positioned approximately midway between the upper and lower margins 18, 20, and may be closer to the upper margin 18, if desired.

[0031] FIG. 4 illustrates by example and without limitation as substantially round bucket style plastic storage bin S having a deep well formed by round outside walls Wand floor F. Such bucket style storage bins S are generally well-known and commercially available from several well-known manufacturers. The bucket style storage bin S may include a single curved handle H accessible on the outside of the wall W near the bucket's upper rim R. Such bucket style plastic storage bins S are generally well-known.

[0032] FIG. 5 illustrates by example and without limitation the bin organizer 10 being optionally structured to instead accommodate a storage bin S having a round bucket shape generally of the type illustrated in FIG. 4. Here, like numerals indicate like elements for the rectangular bin organizer illustrated in previous figures.

[0033] While the preferred and additional alternative embodiments of the invention have been illustrated and described, it will be appreciated that various changes can be made therein without departing from the spirit and scope of the invention. Therefore, it will be appreciated that various changes can be made therein without departing from the spirit and scope of the invention. Accordingly, the inventor makes the following claims.

What is claimed is:

1. A storage bin organizer device, comprising:
 - a flexible inner wall having an upper margin and a lower margin with an interior surface therebetween, the upper margin defining an opening thereinto;
 - first and second flexible outer walls each having an upper margin and a lower margin, the upper margin of the first and second outer walls being joined to the upper margin of the inner wall on opposite sides of the opening;
 - a flexible floor having an edge margin that is joined to the lower margin of the inner wall;
 - a flexible belt interconnecting the lower margins of the first and second outer walls; and
 - a plurality of pockets formed on the interior surface of the inner wall, each of the one or more of the pockets further comprises a mouth opening thereinto positioned between the upper and lower margins of the interior surface of the inner wall and substantially aligned therewith.
2. The device of claim 1 wherein the opening further comprising a substantially rectangular opening.
3. The device of claim 1 wherein each of the first and second outer walls further comprises respective first and second edge margins intervening between the upper and lower margins, the first and second edge margins being spaced apart.

4. The device of claim 3 wherein the belt is further coupled to the first and second outer walls between both the spaced apart first and second edge margins of the first and second outer walls.

5. The device of claim 4 wherein the belt further comprises a pair of cooperating belts each coupled to a respective one of the first and second spaced apart first edge margins of the first and second outer walls; and

a belt coupler operable between the pair of cooperating belts.

6. The device of claim 1 wherein one or more of the pockets further comprises an elasticized opening thereinto.

7. The device of claim 1, further comprising closure mechanism structured for closing an opening into one or more of the pockets.

8. The device of claim 1, further comprising a movable flap closure adjacent to an opening into one or more of the pockets.

9. The device of claim 8, further comprising a fastener between the movable flap closure and a surface of the pocket adjacent to the opening thereinto.

10. The device of claim 9 wherein the fastener further comprises one of: a button-and-hole fastener, a snap fastener, a belt-and-buckle fastener, and a fabric hook-and-loop fastener.

11. A storage bin organizer device, comprising:

a liner, comprising:

a substantially continuous downwardly depending flexible inner fabric wall having an upper margin and a lower margin with a substantially continuous interior surface therebetween, the upper margin defining a substantially continuous opening between opposing portions of the interior surface of the inner wall;

first and second substantially continuous downwardly depending flexible outer fabric walls each having an upper margin and a lower margin and first and second edge margins intervening therebetween, the upper margin of the first and second outer walls being connected in a substantially continuous manner to the upper margin of the inner wall on opposite sides of the opening, the respective first edge margins being spaced apart along the upper edge margin, and the respective second edge margins being spaced apart along the upper edge margin;

a substantially continuous flexible fabric floor having a continuous edge margin that is connected in a substantially continuous manner to the lower margin of the inner wall; and

a fabric belt connected to the lower margins of the first and second outer walls, the belt interconnecting the respective spaced apart first edge margins of the first and second outer walls, and interconnecting the respective spaced apart second edge margins of the first and second outer walls; and

a plurality of fabric pockets provided on an interior of the liner, each pocket comprising a substantially continuous flexible fabric panel connected to the interior surface of the inner wall and extending between the upper and lower margins thereof with an opening thereinto positioned between the upper and lower margins of the interior surface of the inner wall and substantially aligned therewith.

12. The device of claim 11 wherein the opening between opposing portions of the interior surface of the inner wall further comprising a substantially rectangular opening.

13. The device of claim 11 wherein the opening between opposing portions of the interior surface of the inner wall further comprising a substantially circular opening.

14. The device of claim 11 wherein the belt further comprises a cooperating pair of belts each having a first portion coupled to a respective one of the spaced apart first edge margins of the first and second outer walls, and a second portion coupled to a respective one of the spaced apart second edge margins of the first and second outer walls; and

further comprising a first belt coupler operable between the first portions of the belts, and a second belt coupler operable between the second portions of the belts.

15. The device of claim 11 wherein one or more of the pockets further comprises an elasticized opening thereinto.

16. The device of claim 11, further comprising a movable fabric flap closure adjacent to an opening into one or more of the pockets, and a closure means for closing movable flap over the opening into one or more of the pockets.

17. A storage bin organizer device, comprising:

a plurality of substantially unitary fabric inner wall panels each having spaced apart upper and lower margins with substantially continuous interior and exterior surfaces therebetween, the inner wall panels being joined together in a substantially continuous manner along respective edges between the upper and lower margins into a substantially continuous downwardly depending flexible inner wall having a substantially continuous upper margin and a substantially continuous lower margin with substantially continuous interior surfaces therebetween and substantially continuous exterior surfaces external thereof, the substantially continuous upper margin defining a substantially rectangular opening between opposing interior surfaces of opposing inner wall panels;

a pair of substantially unitary fabric outer wall panels each having spaced apart upper margin and lower margins connected by spaced apart edge margins with substantially continuous interior and exterior surfaces therebetween, the upper margin of each of the outer walls being connected in a substantially continuous manner to the upper margin of the inner wall on opposite sides of the rectangular opening and forming a fold between each of the outer walls and the upper margin of the inner wall along the interconnected upper margin of each of the outer walls and the upper margin of the inner wall with the interior surface of each outer wall panel facing the exterior surface of one of the inner wall panels, the respective first edge margins of the pair of outer walls forming a first space therebetween along the upper edge margin, and the respective second edge margins forming a second space therebetween along the upper edge margin;

a substantially unitary fabric floor having a continuous edge margin that is connected in a substantially continuous manner to the lower margin of the inner wall; and

first and second fabric belts each joined in a substantially continuous manner to the lower margins of first and second outer walls respectively, respective first end portions of the belts extending between the respective

spaced apart first edge margins of the first and second outer walls, and respective second end portions of the belts extending between the respective spaced apart second edge margins of the first and second outer walls; a first belt coupler coupled between the respective first end portions of the first and second belts; a second belt coupler coupled between the respective second end portions of the first and second belts; and a plurality of substantially unitary fabric pockets, each pocket being connected in a substantially continuous manner to the interior surface of one of the inner walls and extending between the upper and lower margins thereof with an opening thereinto positioned between the upper and lower margins of the interior surface of the inner wall and substantially aligned therewith.

18. The device of claim 17 wherein one or more of the pockets further comprises an elasticized opening thereinto.

19. The device of claim 17, further comprising a movable flap closure adjacent to an opening into one or more of the pockets, the flap closure comprising a substantially unitary fabric panel having a folding edge joined to the interior surface of one of the inner wall panels adjacent to a top edge of the pocket panel; and

a closure means for closing movable flap over the opening into one or more of the pockets.

20. The device of claim 17, further comprising a storage bin having four substantially planar walls formed in a closed rectangle shape and a substantially rectangular floor formed

along bottom edges of the walls, top edges of the walls forming a rim surrounding a substantially rectangular opening into a cavity formed between the floor and the four walls, and first and second handles formed in an opposing pair of the walls; and

the fabric floor substantially conforming to the floor of the storage bin;

the exterior surfaces of each of the inner wall panels substantially conforming to a different one of the four storage bin walls;

the fold between each of the outer walls and the upper margin of the inner wall being fit over the rim surrounding the rectangular opening into the storage bin, the upper margin of each of the outer walls and the upper margin of the inner wall substantially conforming to the top edges of the walls forming the rim, and the first and second spaces between the respective first and second edge margins of the pair of outer walls exposing the first and second handles formed in the opposing pair of the storage bin walls;

the first end portions of the belts being coupled by the first belt coupler adjacent the first one of the handles formed in the storage bin walls; and

the second end portions of the belts being coupled by the second belt coupler adjacent the second one of the handles formed in the storage bin walls.

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