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(54) **STORAGE CONTAINER WITH LOCKING HANDLE**

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(75) Inventor: **David A. Schenker**, Cedarburg, WI (US)

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Correspondence Address:  
**ANDRUS, SCEALES, STARKE & SAWALL, LLP**  
**100 EAST WISCONSIN AVENUE, SUITE 1100**  
**MILWAUKEE, WI 53202 (US)**

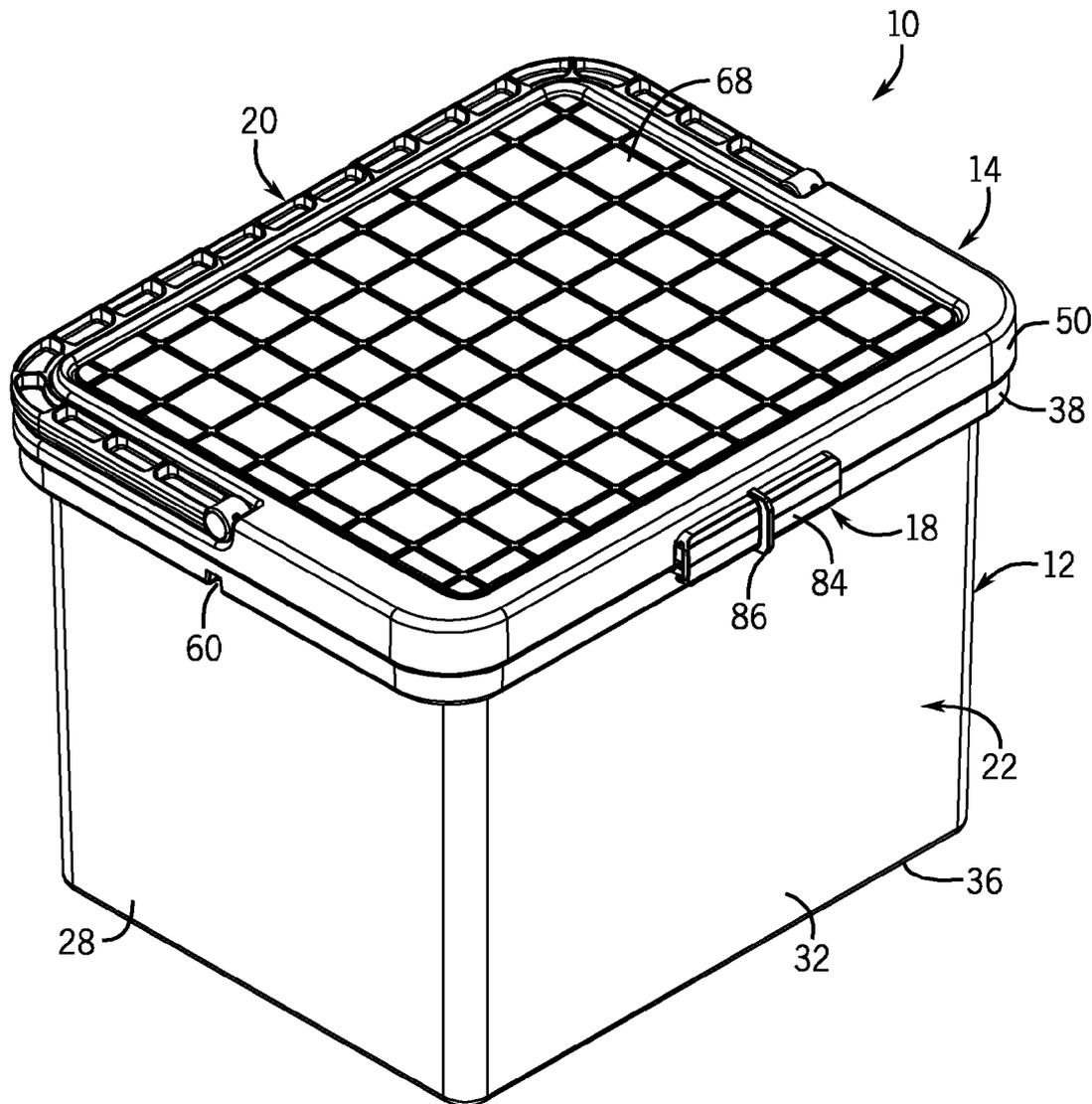
(57) **ABSTRACT**

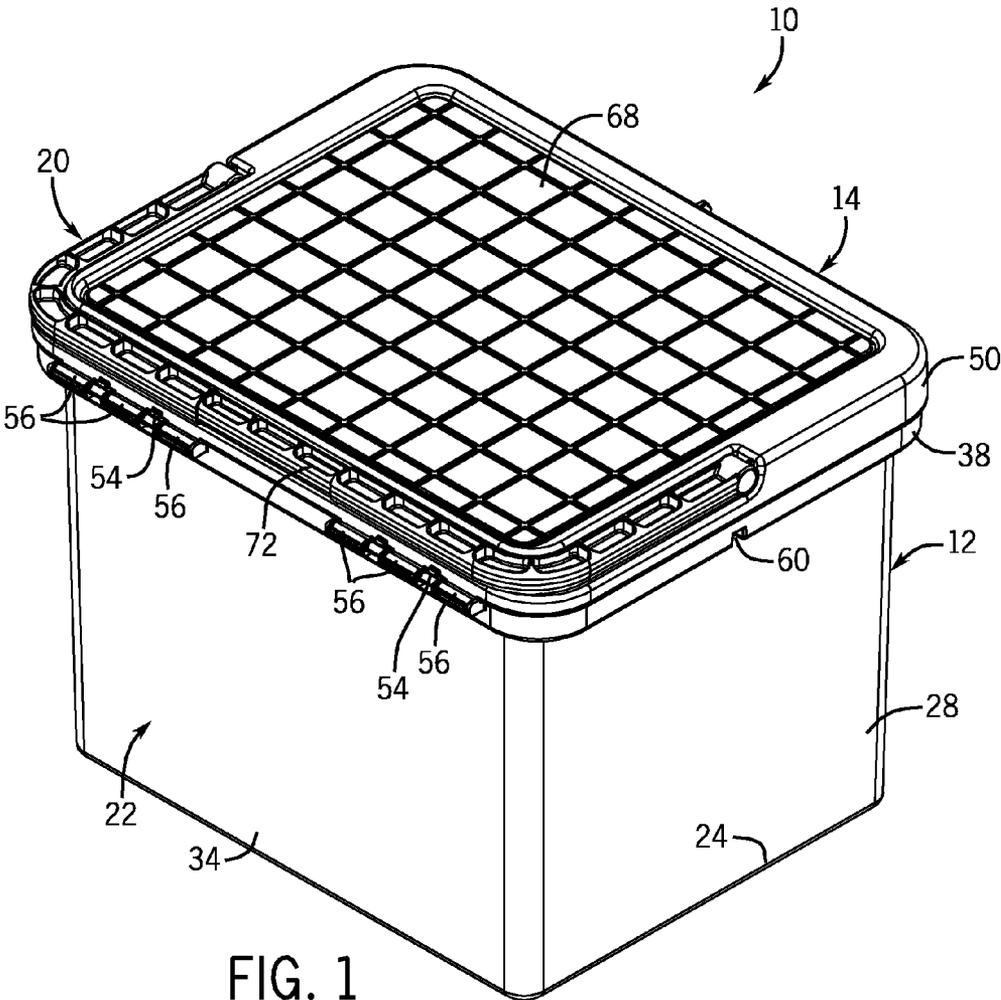
A portable storage container includes a storage body having an outer wall and a bottom wall joined to the outer wall to define an open storage cavity wherein the outer wall is joined to a peripheral flange extending around the storage body. A lid is receivable on the storage body to enclose the storage cavity. The lid is movable between an open position and a closed position relative to the storage body. A handle has opposite ends attached to the lid and is movable between a collapsed, unlocked storage position and an upright, locked carrying position wherein the opposite ends are frictionally engageable with the peripheral flange.

(73) Assignee: **INNOVATIVE STORAGE DESIGNS, INC.**, Mequon, WI (US)

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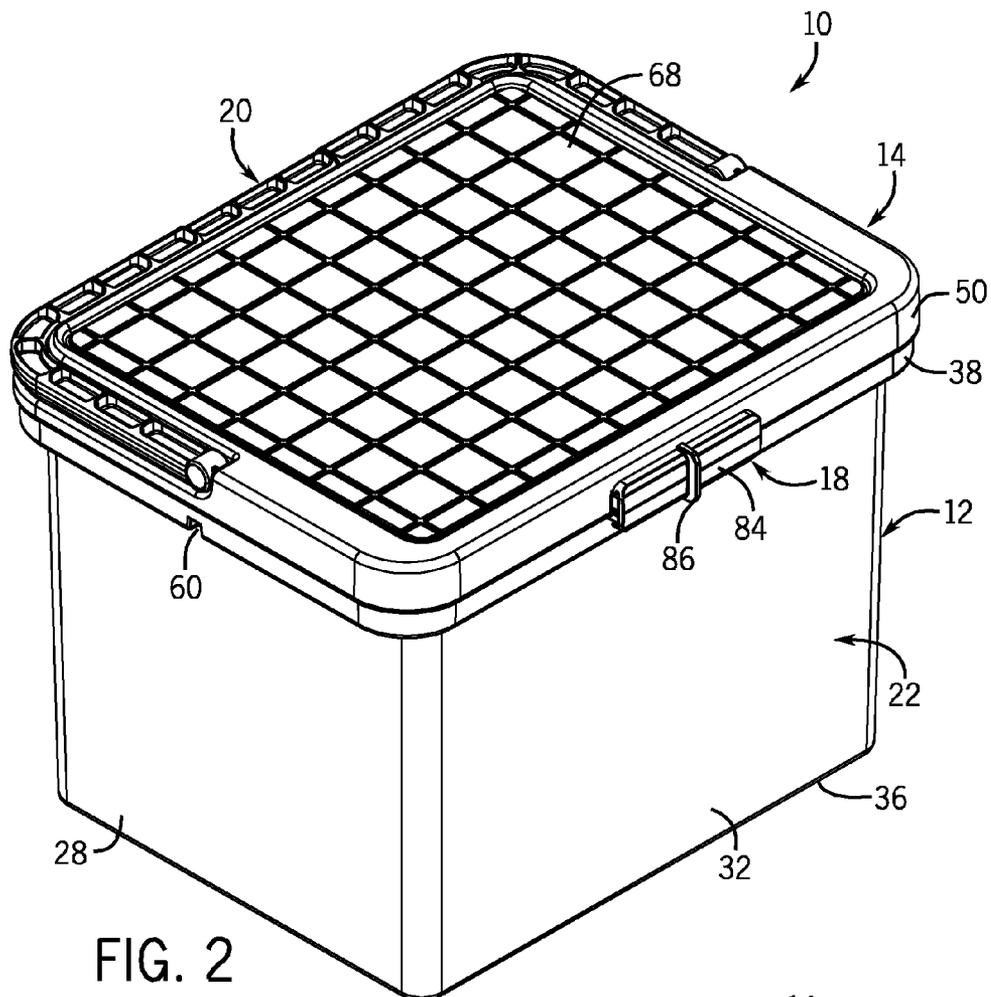


FIG. 2

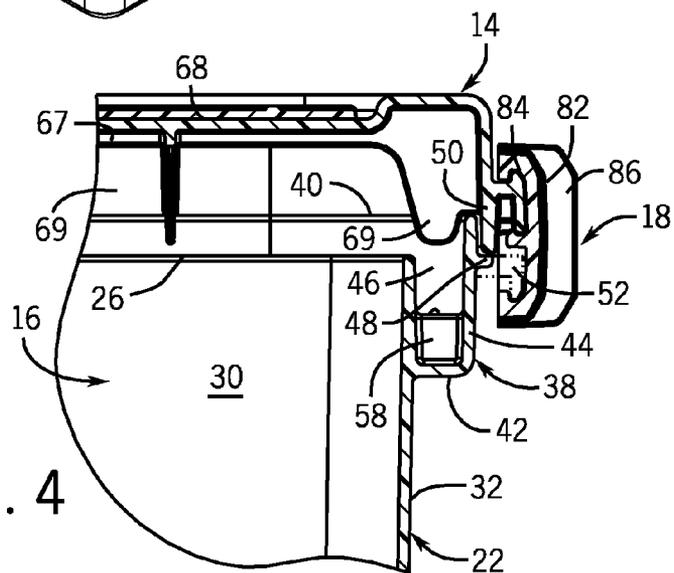
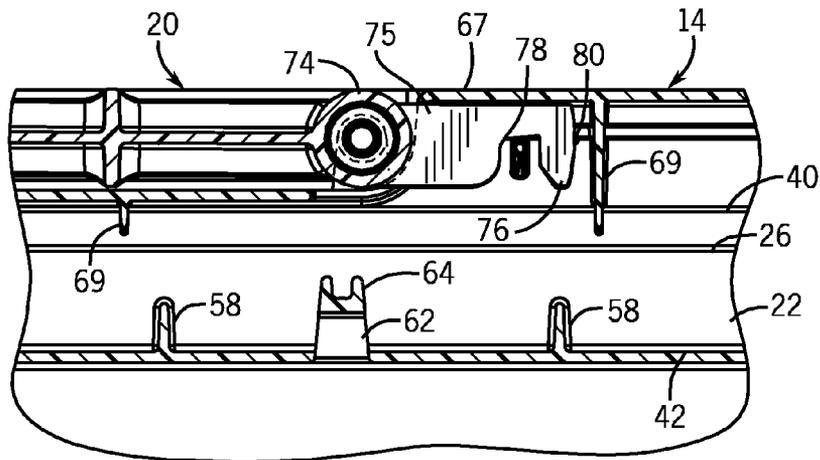
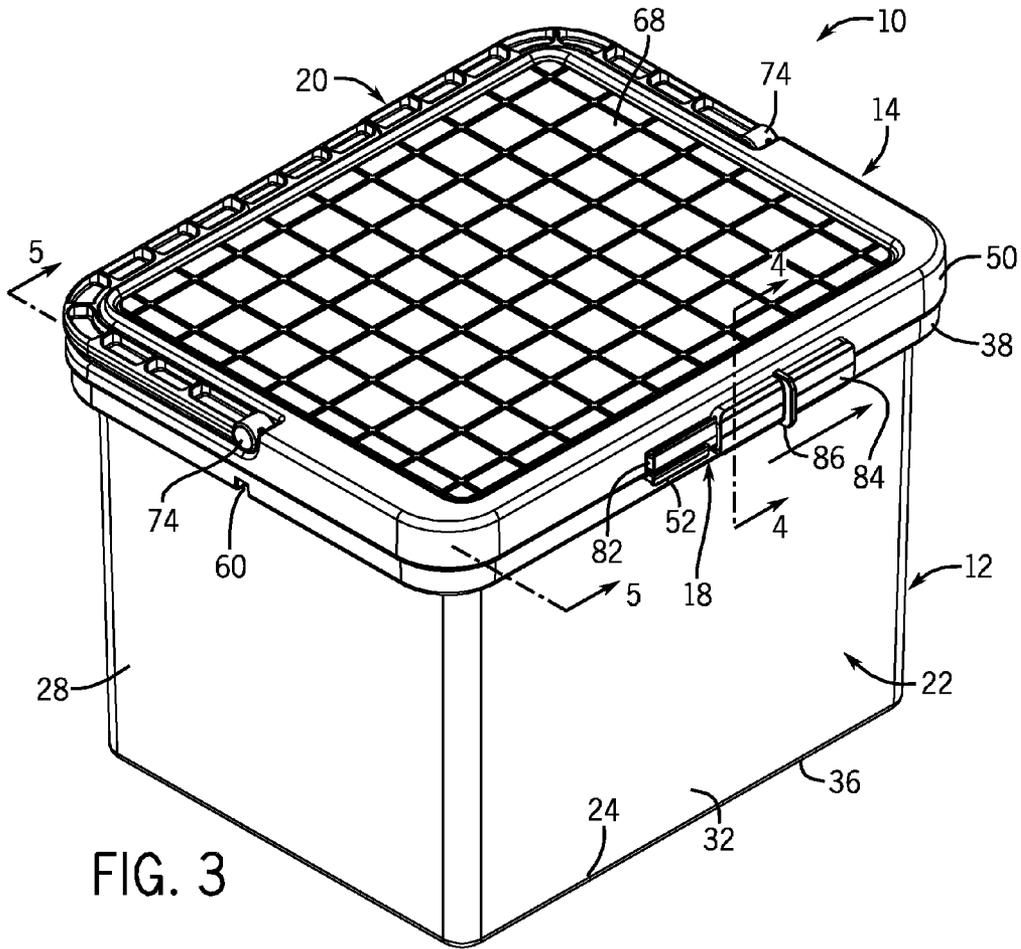


FIG. 4





**STORAGE CONTAINER WITH LOCKING HANDLE**

**FIELD OF THE INVENTION**

[0001] The present invention relates generally to portable storage containers for storing and protecting various items such as hanging file folders and the like. More particularly, the present invention relates to a storage body having a lid and handle structure that improves the load carrying capability and aesthetic design of the storage container.

**BACKGROUND OF THE INVENTION**

[0002] Presently, storage containers are known that are designed to allow a series of hanging file folders or other items to be supported within a container body. The storage containers may include a separate or attached lid to enclose and cover the container to prevent dirt, debris or moisture from entering the storage container and damaging the material therein. Certain storage containers may also include a handle secured to the lid or the container to enable carrying the storage container and the contents therein. Sometimes, the handles are used to aid in removing the lid from the container body.

[0003] Some storage containers are provided with handles that are pivotally attached either to the lid or the container body, and are typically moved between a storage position and a carrying position on the lid or container body. These handles can protrude undesirably from the periphery of the storage container and, depending on their attachments to the lid or container body, may cause deformation of the lid or container body when the storage container is loaded. Therefore, a need exists for a storage container having a lid and handle structure that will be both aesthetically pleasing and also provide for a better load distribution that will maintain the shape of this storage container when filled.

**SUMMARY OF THE INVENTION**

[0004] The present invention relates to a portable storage container including a storage body having an outer wall and a bottom wall joined to the outer wall to define an open storage cavity wherein the outer wall is joined to a peripheral flange extending around the storage body. The storage container also contains a lid that is receivable on the storage body to enclose a storage cavity, the lid being movable between an open position and a closed position relative to the storage body. The storage container further includes a handle having opposite ends attached to the lid. The handle is movable between a collapsed, unlocked storage position within the lid and an upright, locked carrying position wherein the opposite ends are frictionally engageable with the peripheral flange.

[0005] The lid and the peripheral flange are provided with a latching arrangement for selectively latching and unlatching the lid on the storage body. In the preferred embodiment, the lid is pivotally attached to the storage body and the handle is shaped to follow a contour of a peripheral wall of the lid when the handle is in the collapsed storage position. The peripheral flange includes a base wall and a side wall wherein the base wall extends generally perpendicular to the outer wall of the storage body. The opposite ends of the handle include pivot rollers and hooks extending from the pivot rollers. The hooks have nibs that are frictionally engageable with the base wall of the peripheral flange when the handle is in the upright locked position. The peripheral flange includes a pair of upwardly

rising walls joined to a pair of notched walls. The rising walls and the notched walls define passageways for receiving the hooks when the handle is in the upright locked position. The hooks have foot portions that fit into the passageways and bearing portions that engage the notched walls.

[0006] In another aspect of the invention, a portable storage container includes a storage body having an outer wall and a bottom wall joined to the outer wall to define an open storage cavity wherein the outer wall is joined to a peripheral flange extending around the storage body. A lid is pivotally attached to the storage body for selectively covering and uncovering the storage cavity. The lid has a peripheral wall formed with a recess along a portion thereof. A handle has opposite ends pivotally attached to opposite sides of the lid. The handle is movable between a collapsed, unlocked storage position located in the recess of the lid, and an upright, locked carrying position wherein the opposite ends are frictionally engageable with the peripheral flange. A latching arrangement is provided between the lid and the peripheral flange for selectively latching and unlatching the lid relative to the storage body.

[0007] The peripheral flange includes a base wall and a side wall wherein the base wall extends generally perpendicularly to the outer wall of the storage body. The side wall of the peripheral flange includes a stop rib engageable with the lid. The latching arrangement includes a first latching element fixed on the peripheral flange, a second latching element fixed on the peripheral wall of the lid and a catch slidably mounted on the second latching element and slidable back and forth on the first and second latching elements to selectively latch and unlatch the lid relative to the storage body. A series of tabs extends between the side wall of the peripheral flange and the outer wall of the storage body. A series of fins project downwardly from an underside of the lid. The fins are received in a cavity between the side wall of the peripheral flange and the outer wall of the storage body.

**BRIEF DESCRIPTION OF THE DRAWINGS**

[0008] The drawings illustrate the best mode presently contemplated for carrying out the invention.

[0009] In the drawings:

[0010] FIG. 1 is a rear perspective view of a portable storage container with a locking handle in accordance with the present invention;

[0011] FIG. 2 is a front perspective view of FIG. 1 with a lid in a latched position;

[0012] FIG. 3 is a view like FIG. 2 with the lid in an unlatched position;

[0013] FIG. 4 is a sectional view taken on line 4-4 of FIG. 3;

[0014] FIG. 5 is a sectional view taken on line 5-5 of FIG. 3 showing the handle in a collapsed, unlocked storage position;

[0015] FIG. 6 is a view like FIG. 5 showing the handle in an upright, locked carrying position; and

[0016] FIG. 7 is a sectional view taken on line 7-7 of FIG. 6.

**DETAILED DESCRIPTION OF THE INVENTION**

[0017] Referring now to the drawings, FIGS. 1-3 illustrate various perspective views of a portable storage container 10 that can be used to store and protect various items. Storage container 10 is particularly useful as a mobile file box for

enclosing and holding a series of hanging file folders for storage of records and other information. The storage container 10 is comprised of a storage body 12 and a lid 14 that is pivotally attached and received on the storage body 12 for enclosing an open storage cavity 16 (FIG. 4) which is generally rectangular in cross section. Pivoting lid 14 is selectively latched and unlatched on the storage body 12 by means of a latching arrangement 18. A U-shaped handle 20 is swingably secured to the lid 14 between a collapsed, unlocked storage position (FIGS. 1-5) and an upright, locked carrying position (FIGS. 6 and 7). In the preferred embodiment, the storage body 12, the lid 14, the latching arrangement 18 and the handle 20 are preferably constructed of a durable, yet lightweight plastic material.

[0018] The storage body 12 has an outer peripheral wall 22 that extends from a lower end 24 to an upper end 26 that serves as a hanging file support edge. The file support edge 26 defines the top peripheral edge of the storage body 12 and thus defines the access opening to the open storage cavity 16. The outer peripheral wall 22 that forms the generally open storage cavity 16 includes a pair of side walls 28, and a pair of end walls 32, 34 that serve as the respective front and rear walls of the storage body 12. The outer peripheral wall 22 is joined to the peripheral edge of a bottom wall 36 which generally defines the base of the storage body 12.

[0019] The storage body 12 further includes a peripheral flange 38 that extends around the entire outer peripheral wall 22. The peripheral flange 38 is joined to the outer peripheral wall 22 and defines a top edge 40 that is spaced laterally outward and upward from the file support edge 26 formed by outer peripheral wall 22.

[0020] As can be best seen in FIG. 4, the peripheral flange 38 includes a base wall 42 and a side wall 44. The base wall 42 extends generally perpendicular to the outer peripheral wall 22. The side wall 44 extends perpendicularly to the base wall 42 and parallel to the outer peripheral wall 22. The combination of the base wall 42 and the side wall 44 forms a lid receiving cavity 46 between outer peripheral wall 22 of storage body 12 and the side wall 44 of peripheral flange 38.

[0021] As best shown in FIG. 4, the top edge 40 of the peripheral flange 38 lies above the file support edge 26 of the outer peripheral wall 22 such that when the lid 14 is mounted upon the storage body 12, the lid 14 contacts the top edge 40 and is spaced above the file support edge 26.

[0022] The side wall 44 includes a stop rib 48 that protrudes outwardly therefrom as shown in FIGS. 4 and 7. The lid 14 includes an outer peripheral wall 50 that engages the stop rib 48 when the lid 14 is in a closed position as depicted in FIGS. 1-3. The side wall 44 also includes an elongated latching element 52 that protrudes outwardly therefrom when viewed from the front of the storage body 12, and forms part of the latching arrangement 18. The side wall 44 further includes a pair of spaced apart pivot rods 54 that extend outwardly when viewed from the rear of the storage body 12 as shown in FIG. 1. The pivot rods 54 define bearing surfaces pivotally engaged by a series of pivot hooks 56 formed on a rear portion of the lid outer peripheral wall 50.

[0023] The storage container 10 includes a number of spaced alignment tabs 58 that extend upwardly from the base wall 42 between the side wall 44 of the peripheral flange 38 and the outer peripheral wall 22 of the storage body 12. The alignment tabs 58 can be used to restrict sliding movement of the hanging file folders that can be stored in the storage container 10. The alignment tabs 58 extend along the entire

length of the base wall 42 completely between side wall 44 and outer peripheral wall 22 except for two locations on opposite sides of the peripheral flange 38. At each of these two locations, a recess (one being seen at 60) is formed in the peripheral flange 38. As best seen in FIG. 7, a shortened alignment tab 58 is integrally joined to an upwardly rising wall 62 extending from base wall 42, and a notched wall 64 extending horizontally inwardly from side wall 44. Each upwardly rising wall 62 and notched wall 64 help define a passageway 66 used in locking of the handle 20 in the locked position as will be further described below.

[0024] As seen in FIGS. 1-3, the outer peripheral wall 50 of the lid 14 surrounds an upper wall 67 that is preferably provided with a non-slip material 68. The underside of upper wall 67 is provided with a series of stabilizing fins 69 that are designed to fit into the cavity 46 when lid 14 is closed as shown in FIG. 4. A rear portion of the outer peripheral wall 50 is recessed at 70 (FIG. 6) to conveniently accommodate the handle 20 in its collapsed, unlocked storage position. In this position, the handle 20 generally follows the contour of the outer peripheral wall 50 and presents a pleasing aesthetic appearance at the top of the storage container 10. As seen in FIG. 1, the top 72 of the handle is preferably provided with a soft grip, non-slip material to improve handling. Outer ends of the handle 20 are provided with pivot rollers 74 (FIGS. 5-7) that pivot relative to the recess portion of the outer peripheral wall 50 of lid 14. The pivot rollers 74 include hooks 75 having foot portions 76 and bearing portions 78. As seen in FIGS. 5 and 6, when the handle 20 is pivoted from the collapsed position to an upright position, the foot portions 76 fit into the passageways 66 and the bearing portions 78 engage a portion of the notched walls 64. The foot portions 76 have nibs 80 (FIG. 5) on their bottom surfaces for frictionally engaging the foot portions 76 relative to the base wall 42 so that the handle 20 maintains the upright locked carrying position.

[0025] Referring now to FIGS. 3 and 4, a front side of the outer peripheral wall 50 of lid 14 includes an elongated latching element 82 that protrudes outwardly therefrom. The latching element 82 is aligned with, located above and has a greater length than the latching element 52 on peripheral flange 38 of storage body 12. A catch 84 is slidably mounted and retained on the latching element 82. The latching arrangement 18 is thus collectively defined by the latching elements 52 and 82 and the catch 84, and is used to selectively latch and unlatch the lid 14 relative to the top of the storage body 12. A tab 86 protrudes outwardly from the center of the catch 84 and is designed to be engaged by one or more fingers so as to slide the catch 84 back and forth.

[0026] In the last position shown in FIG. 2, the catch 84 is slidably mounted to capture the latching elements 52 and 82 and hold the lid 14 and storage body 12 together. In the unlatched position shown in FIG. 3, the catch 82 is slidably moved to the right as shown by the arrow so that the lid 14 may be freely pivoted upwardly upon storage body 12 to an open position.

[0027] When the latching arrangement 18 is in the latched position, the handle 20 may be pivoted or swung from the collapsed, unlocked storage position shown in FIG. 5 to the upright, locked carrying position as shown in FIG. 6. With the handle 20 in the locked position, it is important to appreciate that the load from the storage container 12 and any contents therein is distributed and borne by both the storage container 12 and the lid 14 because of the engagement of the handle hooks 75 with the elements 42, 62 and 64 of the storage body

and the engagement of the rollers 74 on lid 14. This is in contrast with the prior art storage containers in which handles engage only the lid or storage body causing undesirable loading and possible deformation of the storage body and the lid. The latching arrangement 18 provides a positive latching action that keeps the lid 14 normally closed against the top of the storage body 12 until the handle 12 is swung back to the collapsed storage position at which time the lid 14 may be pivotally opened by sliding the catch 84 in the opposite direction. When the handle 20 is in the collapsed storage position, it follows the general contour of the lid periphery and presents a pleasing esthetic design such that the handle 20 appears to be part of the lid 14.

[0028] While the invention has been described with reference to a preferred embodiment, those skilled in the art will appreciate that certain substitutions, alterations and omissions may be made without departing from the spirit throughout. Accordingly, the foregoing description is meant to be exemplary only and should not be deemed limitative on the scope of the invention set forth with the following claims.

I claim:

- 1. A portable storage container comprising:
  - a storage body having an outer wall and a bottom wall joined to the outer wall to define an open storage cavity, wherein the outer wall is joined to a peripheral flange extending around the storage body;
  - a lid receivable on the storage body to enclose the storage cavity, the lid being movable between an open position and a closed position relative to the storage body, and
  - a handle having opposite ends attached to the lid, the handle being movable between a collapsed, unlocked storage position within the lid and an upright, locked carrying position wherein the opposite ends are frictionally engageable with the peripheral flange.
- 2. The portable storage container of claim 1, wherein the lid and the peripheral flange are provided with a latching arrangement for selectively latching and unlatching the lid on the storage body.
- 3. The portable storage container of claim 1, wherein the lid is pivotally attached to the storage body.
- 4. The portable storage container of claim 1, wherein the handle is shaped to follow a contour of a peripheral wall of the lid when the handle is in the collapsed, unlocked storage position.
- 5. The portable storage container of claim 1, wherein the peripheral flange includes a base wall and a side wall wherein the base wall extends generally perpendicular to the outer wall of the storage body.
- 6. The portable storage container of claim 5, wherein the opposite ends of the handle include pivot rollers and hooks extending from the pivot rollers.
- 7. The portable storage container of claim 6, wherein the hooks have nibs that are frictionally engageable with the base wall of the peripheral flange when the handle is in the upright, locked carrying position.
- 8. The portable storage container of claim 6, wherein the peripheral flange includes a pair of upwardly rising walls joined to a pair of notched walls, the rising walls and the

notched walls defining passageways for receiving the hooks when the handle is in the upright locked carrying position.

9. The portable storage container of claim 8, wherein the hooks have foot portions that fit into the passageways and bearing portions that engage the notched walls.

10. A portable storage container comprising:

- a storage body having an outer wall and a bottom wall joined to the outer wall to define an open storage cavity, wherein the outer wall is joined to a peripheral flange extending around the storage body;
- a lid pivotally attached to the storage body for selectively covering and uncovering the storage cavity, the lid having a peripheral wall formed with a recess along a portion thereof;
- a handle having opposite ends pivotally attached to opposite sides of the lid, the handle being movable between a collapsible, unlocked storage position located in the recess of the lid, and an upright, locked carrying position wherein the opposite ends are frictionally engageable with the peripheral flange; and
- a latching arrangement provided between the lid and the peripheral flange for selectively latching and unlatching the lid relative to the storage body.

11. The portable storage container of claim 10, wherein the peripheral flange includes a base wall and a side wall wherein the base wall extends generally perpendicular to the outer wall of the storage body.

12. The portable storage container of claim 11, wherein the side wall of the peripheral flange includes a stop rib engageable with the lid.

13. The portable storage container of claim 10, wherein the opposite ends of the handles include pivot rollers and hooks extending from the pivot rollers.

14. The portable storage container of claim 13, wherein the hooks have nibs that are frictionally engageable with the base wall of the peripheral flange when the handle is in the upright, locked carrying position.

15. The portable storage container of claim 13, wherein the hooks have bearing portions that are engageable with notched walls formed on the peripheral flange.

16. The portable storage container of claim 10, wherein the latching arrangement includes

- a first latching element fixed on the peripheral flange,
- a second latching element fixed on the peripheral wall of the lid, and
- a catch slidably mounted on the second latching element and slidable back and forth on the first and second latching elements to selectively latch and unlatch the lid relative to the storage body.

17. The portable storage container of claim 11, wherein a series of tabs extends between the side wall of the peripheral flange and the outer wall of the storage body.

18. The portable storage container of claim 11, wherein a series of fins project downwardly from an underside of the lid, the fins being received in a cavity between the side wall of the peripheral flange and the outer wall of the storage body.

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