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(54) **HARD-CORE CONTAINER WITH FABRIC POUCHES**

(57) A toolbox is disclosed including a rigid hard body having side walls and a bottom floor defining an internal cavity, one or more soft panels permanently coupled with at least one of the side walls and a handle coupled with the hard body.

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## Description

### Technical Field

**[0001]** This application relates generally to a container. More specifically, this application relates to a hard-core container with fabric pouches.

### Brief Description of the Drawings

**[0002]** The drawings, when considered in connection with the following description, are presented for the purpose of facilitating an understanding of the subject matter sought to be protected.

FIGURE 1 shows an example exploded view of a toolbox according to some embodiments presently disclosed; and

FIGURE 2 shows another example toolbox according to some embodiments presently disclosed.

### Detailed Description

**[0003]** While the present disclosure is described with reference to several illustrative embodiments and example devices described herein, it should be clear that the present disclosure should not be limited to such embodiments. Therefore, the description of the embodiments provided herein is illustrative of the present disclosure and should not limit the scope of the disclosure as claimed. In addition, while following description references particular configurations of container such as a toolbox, it will be appreciated that the disclosure may be applicable with other types of container configurations such as small cabinets.

**[0004]** Briefly described, a system and a method are disclosed including a toolbox for storing items such as tools and equipment. The container or toolbox may have a hard polymer body or other hard and rigid material, such as aluminum, magnesium, steel, laminated panels, and the like, to make the container light-weight and waterproof. The container may also have fabric pouches coupled with it for storing additional items and a closable top to protect stored items.

**[0005]** In various embodiments, the container may include a hard body having side walls and a bottom floor defining an internal cavity. One or more soft panels may be coupled with at least one of the side walls. A handle may also be coupled with the hard body.

**[0006]** In various embodiments, the container may also include a closable top coupled with the hard body. The closable top includes a closure to protect items in the internal cavity of the hard body.

**[0007]** Building contractors, construction crews, carpet layers, private do-it-yourself (DIY) people, shipping operations and warehouses often use tools and containers, tool storage boxes and tool bags to store their tools. Most tool storage boxes are bulky and are heavy to carry

around. Some tool storage boxes are made entirely of metal and tend to rust if exposed to moisture. Most tool bags can rip and are hard to clean.

**[0008]** Therefore, there is a need for a container that is light-weight, waterproof, easy to clean and flexible to better protect user's tools and/or equipment.

**[0009]** FIGURE 1 shows an example exploded view of a toolbox according to some embodiments presently disclosed. In various embodiments, the container 100 includes a hard bottom body or base 101, one or more soft pouches or panels 102, 103, and 104, a closeable top 106, a handle 107, wheels 108, a clip bar 109, and a clip 110.

**[0010]** In various embodiments, the hard body 101 is a rigid container that holds its shape relatively intact under the forces of its own weight and the weight of its contents. In a rigid body any deformity, such as bowed sidewalls, caused by heavy weights disappears and the container reverts to its original shape when such forces are removed. includes side walls extending from a bottom floor. The side walls and the bottom floor define internal cavity for storing items such as tools and/or equipment. The hard body 101 may be formed using plastic injection molding process. Specifically, melted polymer material is pushed into a mold to form the hard body 101 shown in Figure 1. In other embodiments, different material may be used to form a rigid body for the container or toolbox, such as aluminum, magnesium, steel, laminated panels, and the like. In various embodiments, the container 100 is made of a waterproof material, such as plastic or metal sheets, that are not permeable to water. This helps in easy cleaning with water (for example, by hosing it down after work), and also makes it possible to lay down the container 100, such as a toolbox, in puddles of water or wet surroundings without getting the contents of the container 100 wet.

**[0011]** In various embodiments, the one or more soft panels (or pouches) 102, 103, and/or 104 may be permanently and unremovably attached or be removably coupled with the side walls of the hard body 101. The soft panels 102, 103, 104 may be formed from fabric and provide one or more pockets for storing items such as hand tools, power tools, and/or other equipment like flashlights and stud-finders. In other embodiments, the soft panels 102-104 may be made of other soft materials, such as soft plastic, mesh, leather, or other suitable material. The one or more soft pouches or panels may be coupled externally to the walls of the hard body 101. The one or more soft panels may also be coupled within the internal cavity defined by the walls of the hard body 101. The soft panels may be permanently sewn using thread to the walls of the hard body 101. The soft panels may also be unremovably riveted using rivets 105 to the hard body 101. In other embodiments, the soft panels or pouches may be removably attached to (for example, detachable by user), or directly or indirectly coupled with the hard body 101. For example, the soft panels may be attached to the hard body, internally (inside container

100) or externally (outside container 100), by locking clamps, screws or bolts attachable to the hard body, hook-and-loop fasteners (like Velcro<sup>®</sup>) and the like. In various embodiments, the soft panels 102-104 may be coupled to a top edge of the side wall(s) of the hard body 101. The soft panels may also be attached at top or any other point, like the middle, along the walls of the hard body 101. In some embodiments, the internal and external panels may be disjoint and separate, while in other embodiments, the internal and external soft panels may be integrated as one piece and straddle one or more of the sidewalls of the hard body 101.

**[0012]** In various embodiments, the closeable top 106 may be permanently or removably coupled with the top edge of the side walls of the hard body 101. The closeable top 106 is formed from fabric and provides a closure to protect items in the internal cavity of the hard body 101. The closure can be, for example, a zipper, Velcro<sup>®</sup>, buckles, snap fasteners, eyelets, studs, and/or hooks and eyes. The closeable top 106 may be sewn using thread to the hard body 101. The closeable top 106 may also be riveted using rivets 105 to the hard body 101. The closeable top 106 may include one or more handles for transporting the container 100. In various embodiments, the closeable top 106 is coupled along the entire top perimeter of the hard body 101. As noted above, in some embodiments, the closeable top 106 may be permanently and unremovably attached to the rigid hard body 101, while in other embodiments, the closable top 106 may be removably attached to the hard body 101 by various techniques, such as a zipper, Velcro<sup>®</sup>, snap buttons, springy hooks, or other similar techniques that may be used to attach the closable top to a rigid rim of the hard body 101.

**[0013]** In various embodiments, the handle 107 is coupled with one of the walls of the hard body 101. The handle 107 may be collapsible for easy transpiration and/or storage of the container 100. The handle 107 may be coupled externally to one of the walls of the hard body 101. The handle 107 may be formed from rigid material. The rigid material can be polymer and/or metal.

**[0014]** In various embodiments, wheels 108 are coupled with the hard body 101. The handle 107 may be coupled externally to the hard body 101 for easy transportation of the container 100. The wheels 108 may be formed from rigid material. The rigid material can be polymer and/or metal.

**[0015]** In various embodiments, the clip bar 109 is coupled with one of the side walls of the hard body 101. The clip bar 109 may be formed from rigid material and provides a way to hang items such as, for example, tools and/or equipment. The rigid material can be polymer and/or metal. The clip bar 109 may be coupled externally to one of the walls of the hard body 101. The clip bar 109 may be riveted using rivets 105 to the hard body 101.

**[0016]** In various embodiments, the clip 110 is coupled with the clip bar 109. The clip 110 may slide along the clip bar 109. The clip 110 provides a way to hang items

such as, for example, tools and/or equipment.

**[0017]** FIGURE 2 shows another example toolbox according to some embodiments presently disclosed. In various embodiments, the container 200 may be a toolbox and includes a hard body 201, one or more soft panels 202, 203, 204, and a handle 206.

**[0018]** In various embodiments, the hard body 201 includes side walls extending from a bottom floor. The side walls and the bottom floor define internal cavity for storing items such as, for example, tools and/or equipment. The hard body 201 may be formed using plastic injection molding process. Specifically, melted polymer material is pushed into a mold to form the hard body 201 shown in Figure 2.

**[0019]** In various embodiments, the one or more soft panels (or pouches) 202, 203, and/or 204 are coupled with the side walls of the hard body 201. The soft panels are formed from fabric and provide one or more pockets for storing items such as, for example, tools and/or equipment. The one or more soft panels may be permanently and unremovably coupled externally to the walls of the hard body 201. In some embodiments, the soft panels 202-204 may also be detachable by the user, for example, using screws, hanging hooks, locking clamp mechanisms, hook-and-loop attachments, and the like. The one or more soft panels may also be coupled within the internal cavity defined by the walls of the hard body 201. The soft panels may be sewn using thread to the hard body 201. The soft panels may also be riveted using rivets 205 to the hard body 201. In various embodiments, the soft panels are coupled to a top edge of the side wall(s) of the hard body 201. The soft panels 202-204 may also be attached at top or any other point, like the middle, along the walls of the hard body 201. In some embodiments, the internal and external panels may be disjoint and separate, while in other embodiments, the internal and external soft panels may be integrated as one piece and straddle one or more of the sidewalls of the hard body 201.

**[0020]** In various embodiments, the handle 206 is coupled with two opposing side walls of the hard body 201. The handle 206 may be riveted to the hard body 201 using rivets 205. The handle 206 may be formed from rigid material. The rigid material can be polymer and/or metal. In some embodiments, the handle 206 is attached fixedly to the hard body 201, such that it does not pivot and stays in the same position above the hard body 201, as shown in FIGURE 2. In other embodiments, the handle 206 is pivotably attached to the hard body 201, such that it can pivot around its attachment point to the hard body 201 to move out of the way and allow easier access to the internal cavity of the toolbox or container 200.

**[0021]** In various embodiments, a clip bar (not shown in FIGURE 2), similar to clip bar 109 of FIGURE 1, may be coupled with the hard body 201. As described above, clips 110 may be attached to the clip bar to be used to hang various tools and implements from the toolbox 201.

**[0022]** It will be understood that unless explicitly stated

or specified, the steps described in a process are not ordered and may not necessarily be performed or occur in the order described or depicted. For example, a step A in a process described prior to a step B in the same process, may actually be performed after step B. In other words, a collection of steps in a process for achieving an end-result may occur in any order unless otherwise stated.

**[0023]** Changes can be made to the claimed invention in light of the above Detailed Description. While the above description details certain embodiments of the invention and describes the best mode contemplated, no matter how detailed the above appears in text, the claimed invention can be practiced in many ways. Details of the system may vary considerably in its implementation details, while still being encompassed by the claimed invention disclosed herein.

**[0024]** Particular terminology used when describing certain features or aspects of the disclosure should not be taken to imply that the terminology is being redefined herein to be restricted to any specific characteristics, features, or aspects of the disclosure with which that terminology is associated. In general, the terms used in the following claims should not be construed to limit the claimed invention to the specific embodiments disclosed in the specification, unless the above Detailed Description section explicitly defines such terms. Accordingly, the actual scope of the claimed invention encompasses not only the disclosed embodiments, but also all equivalent ways of practicing or implementing the claimed invention.

**[0025]** It will be understood by those within the art that, in general, terms used herein, and especially in the appended claims (e.g., bodies of the appended claims) are generally intended as "open" terms (e.g., the term "including" should be interpreted as "including but not limited to," the term "having" should be interpreted as "having at least," the term "includes" should be interpreted as "includes but is not limited to," etc.). It will be further understood by those within the art that if a specific number of an introduced claim recitation is intended, such an intent will be explicitly recited in the claim, and in the absence of such recitation no such intent is present. For example, as an aid to understanding, the following appended claims may contain usage of the introductory phrases "at least one" and "one or more" to introduce claim recitations. However, the use of such phrases should not be construed to imply that the introduction of a claim recitation by the indefinite articles "a" or "an" limits any particular claim containing such introduced claim recitation to inventions containing only one such recitation, even when the same claim includes the introductory phrases "one or more" or "at least one" and indefinite articles such as "a" or "an" (e.g., "a" and/or "an" should typically be interpreted to mean "at least one" or "one or more"); the same holds true for the use of definite articles used to introduce claim recitations. In addition, even if a specific number of an introduced claim recitation is ex-

plicitly recited, those skilled in the art will recognize that such recitation should typically be interpreted to mean at least the recited number (e.g., the bare recitation of "two recitations," without other modifiers, typically means at least two recitations, or two or more recitations). Furthermore, in those instances where a convention analogous to "at least one of A, B, and C, etc." is used, in general such a construction is intended in the sense one having skill in the art would understand the convention (e.g., "a system having at least one of A, B, and C" would include but not be limited to systems that have A alone, B alone, C alone, A and B together, A and C together, B and C together, and/or A, B, and C together, etc.). In those instances where a convention analogous to "at least one of A, B, or C, etc." is used, in general such a construction is intended in the sense one having skill in the art would understand the convention (e.g., "a system having at least one of A, B, or C" would include but not be limited to systems that have A alone, B alone, C alone, A and B together, A and C together, B and C together, and/or A, B, and C together, etc.). It will be further understood by those within the art that virtually any disjunctive word and/or phrase presenting two or more alternative terms, whether in the description, claims, or drawings, should be understood to contemplate the possibilities of including one of the terms, either of the terms, or both terms. For example, the phrase "A or B" will be understood to include the possibilities of "A" or "B" or "A and B." It is further understood that any phrase of the form "A/B" shall mean any one of "A", "B", "A or B", or "A and B". This construct includes the phrase "and/or" itself.

**[0026]** The above specification, examples, and data provide a complete description of the manufacture and use of the claimed invention. Since many embodiments of the claimed invention can be made without departing from the spirit and scope of the disclosure, the invention resides in the claims hereinafter appended. It is further understood that this disclosure is not limited to the disclosed embodiments, but is intended to cover various arrangements included within the spirit and scope of the broadest interpretation so as to encompass all such modifications and equivalent arrangements.

## 45 Claims

1. A container comprising:
  - a rigid hard body having side walls and a bottom floor defining an internal cavity;
  - one or more soft panels coupled with at least one of the side walls; and
  - a handle coupled with the hard body.
2. The container of claim 1, wherein the rigid hard body is formed using plastic injection molding process.
3. The container of claim 1, wherein the one or more

- soft panels are riveted to the rigid hard body.
4. The container of claim 1, wherein the one or more soft panels are sewn to the rigid hard body.
5. The container of claim 1, further comprising a closable top coupled with the hard body, wherein the closable top comprises a closure to protect items in the internal cavity of the rigid hard body.
6. The container of claim 5, wherein the closable top is riveted to the rigid hard body.
7. The container of claim 5, wherein the closable top is sewn to the rigid hard body.
8. The container of claim 5, wherein the handle is collapsible.
9. The container of claim 8, further comprising wheels coupled with the rigid hard body.
10. The container of claim 5, further comprising a clip bar coupled with the rigid hard body.
11. The container of claim 10, wherein the clip bar is unremovably riveted to the rigid hard body.
12. The container of claim 11, further comprising a clip coupled with the clip bar.
13. A toolbox comprising:
- a rigid hard body having side walls and a bottom floor defining an internal cavity;
  - one or more soft pouches coupled with at least one of the side walls on the inside or outside of the rigid side walls; and
  - a handle coupled with the hard body.
14. The toolbox of claim 13, wherein the rigid hardbody is made of one of injection molded plastic and metal.
15. The toolbox of claim 13, wherein the one or more soft panels are made of one of fabric, soft plastic, and leather.
16. The toolbox of claim 13, wherein the one or more soft panels are coupled with the rigid hard body using rivets.
17. The toolbox of claim 1, wherein the one or more soft panels are coupled with the rigid hard body using sewed threads.
18. The toolbox of claim 13, further comprising a clip bar permanently attached to the toolbox.
19. The toolbox of claim 18, wherein the clip bar is useable with a clip to hang tools.
20. The toolbox of claim 18, wherein the handle is pivotably attached to the rigid hard body.

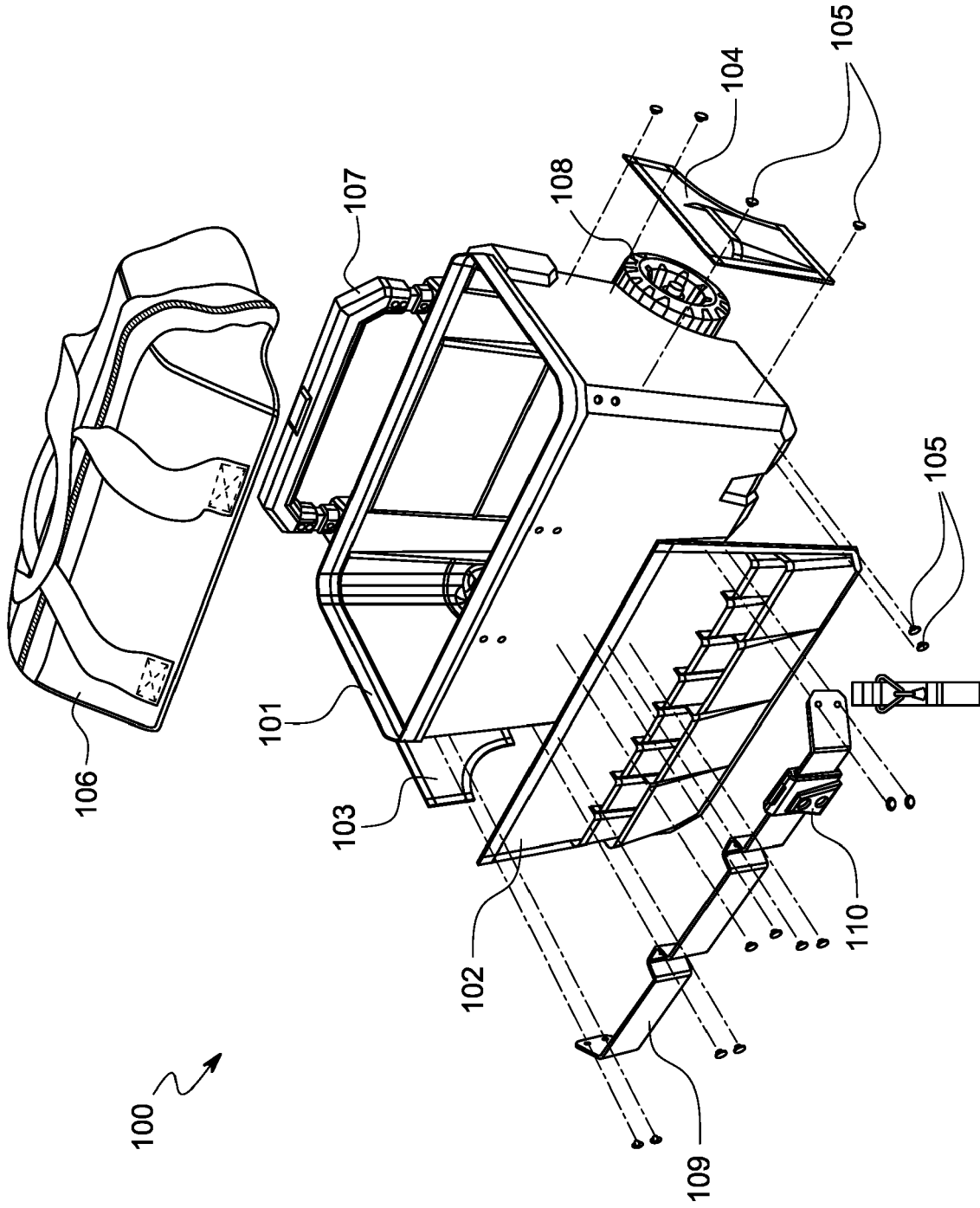


FIG. 1

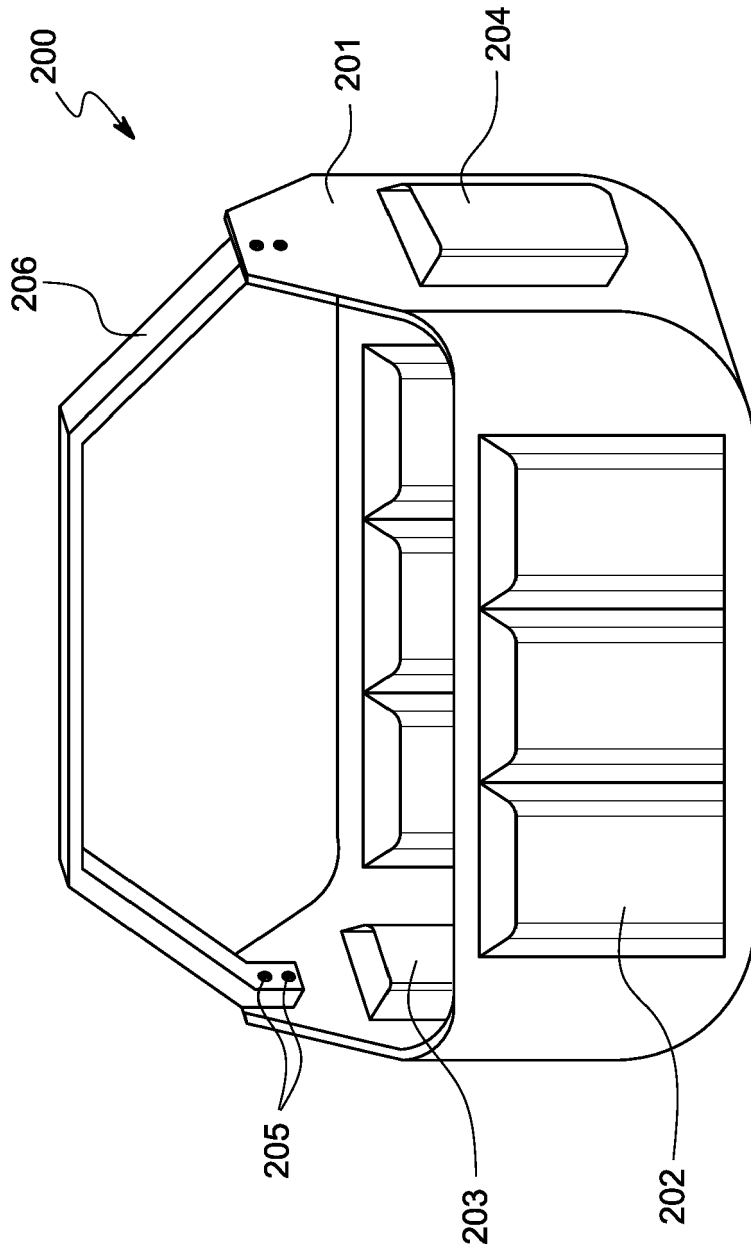


FIG. 2



EUROPEAN SEARCH REPORT

Application Number  
EP 23 18 3293

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Place of search <b>The Hague</b>		Date of completion of the search <b>5 October 2023</b>	Examiner <b>David, Radu</b>
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	

1 EPO FORM 1503 03.82 (F04C01)





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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
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