



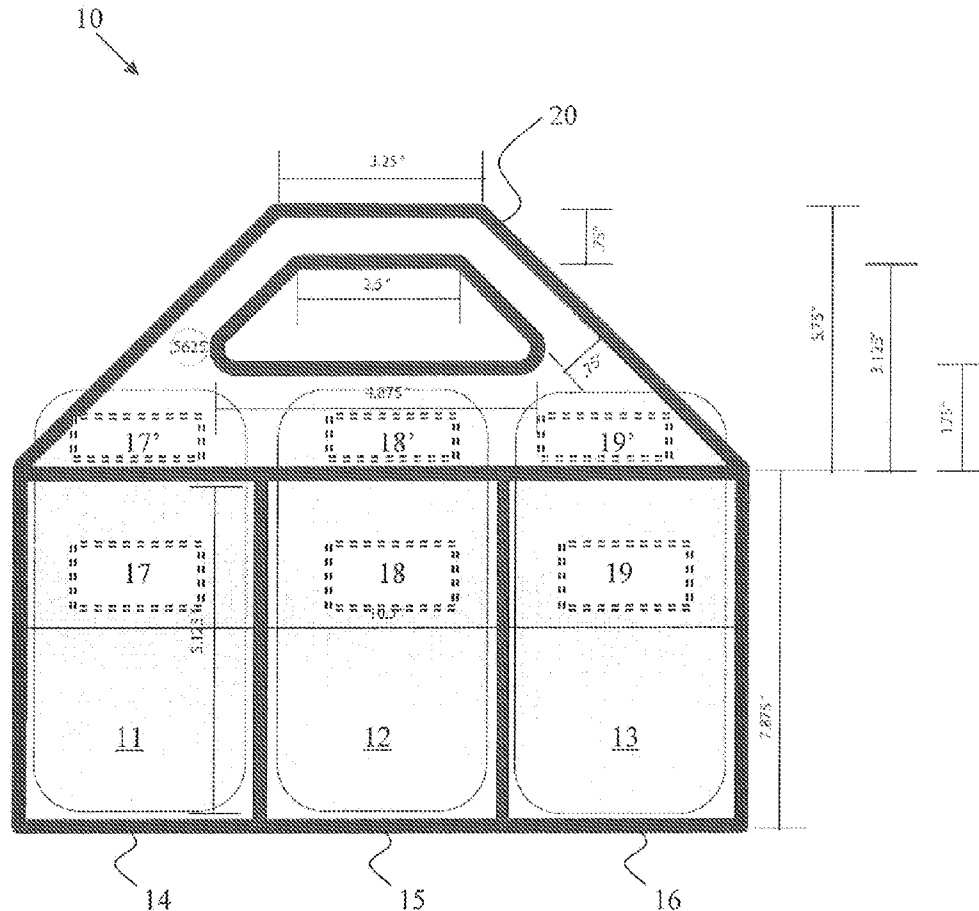
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(19) **United States**(12) **Patent Application Publication**  
**Weed**(10) **Pub. No.: US 2013/0284746 A1**(43) **Pub. Date: Oct. 31, 2013**(54) **REUSABLE CONTAINER AND APPLICATIONS THEREOF**(71) Applicant: **Robert W. Weed, Rome, GA (US)**(72) Inventor: **Robert W. Weed, Rome, GA (US)**(21) Appl. No.: **13/874,009**(22) Filed: **Apr. 30, 2013****Related U.S. Application Data**

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**B65D 25/10** (2006.01)(52) **U.S. Cl.**CPC ..... **B65D 25/04** (2013.01); **B65D 25/10** (2013.01)USPC ..... **220/553**(57) **ABSTRACT**

In one aspect, reusable containers are described herein which, in some embodiments, can mitigate one or more disadvantages of prior packaging addressing related products of varying functionality. In some embodiments, a reusable container described herein comprises a plurality of related products of varying functionality, a handle and a plurality of receptacles, each receptacle having a construction dedicated to a single one of the related products, the construction sufficiently identifying the functionality of the single product to direct correct placement of the single product in the receptacle after removal and use of the single product by a user.



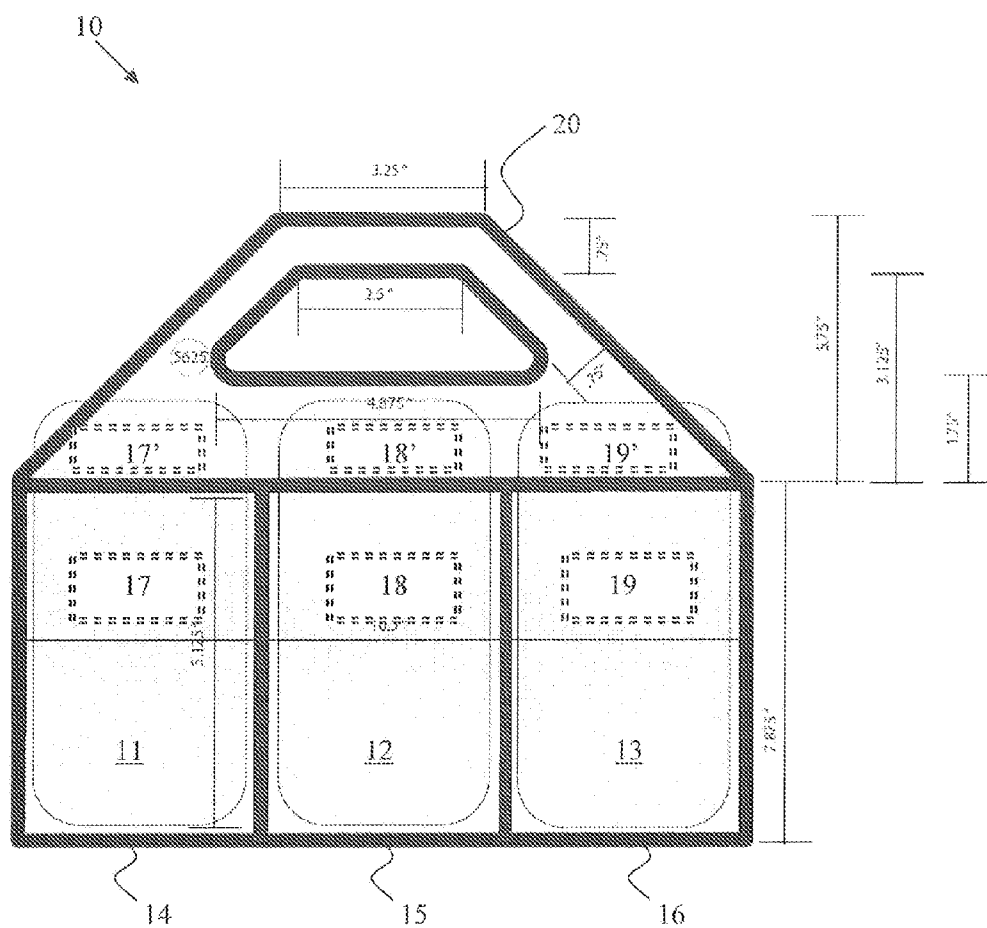


FIGURE 1

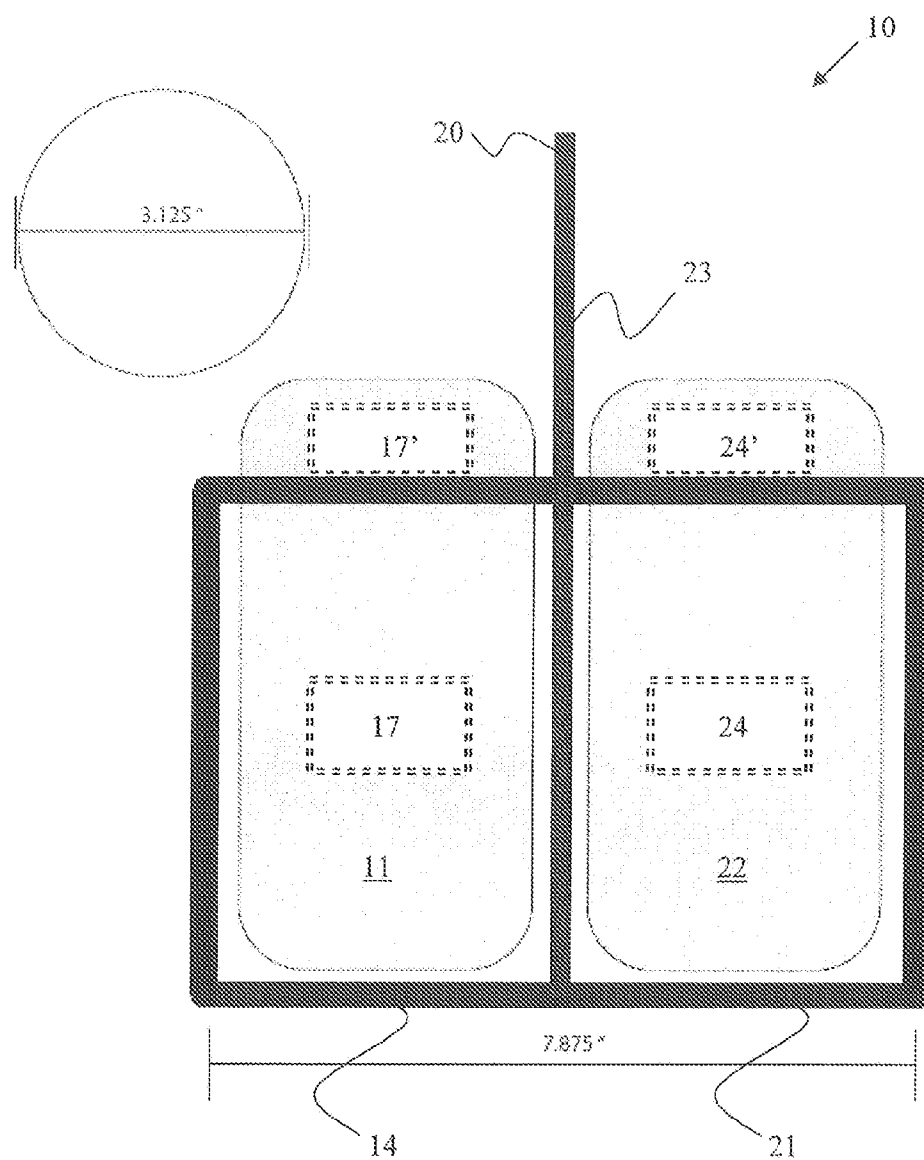


FIGURE 2

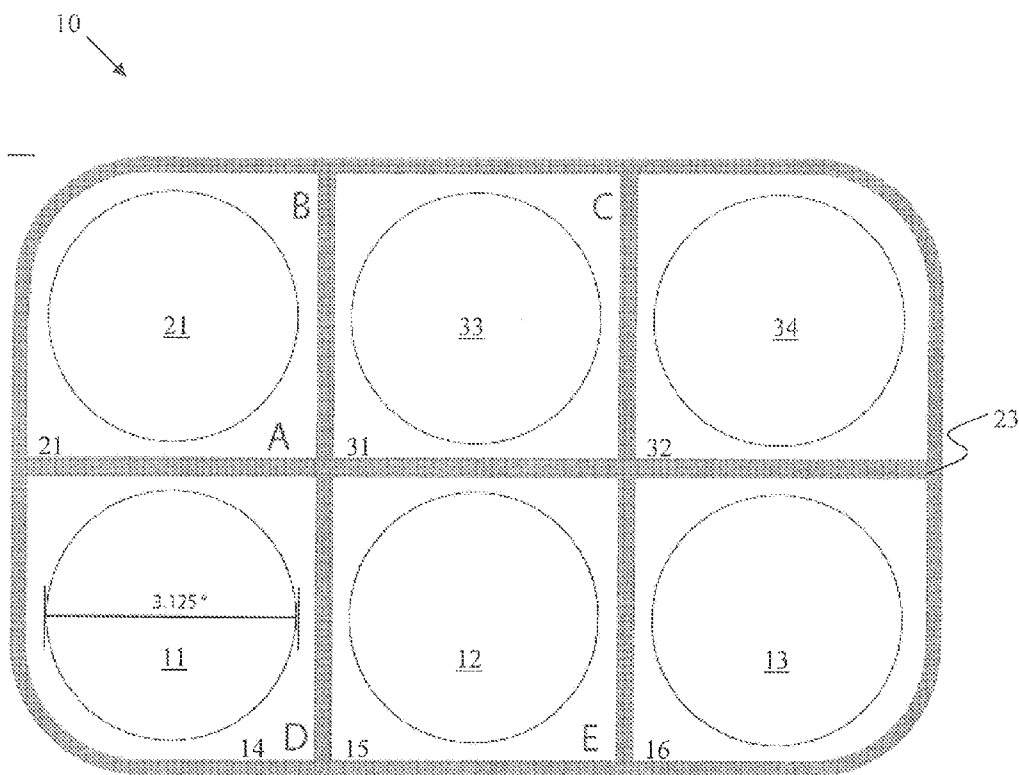


FIGURE 3



FIGURE 4

## REUSABLE CONTAINER AND APPLICATIONS THEREOF

### RELATED APPLICATION DATA

[0001] The present application hereby claims priority under 35 U.S.C. §119(e) to U.S. Provisional Patent Application Ser. No. 61/640,297 filed Apr. 30, 2012, which is hereby incorporated by reference in its *entirety*.

### FIELD

[0002] The present invention relates to containers and, in particular, to reusable containers for related products.

### BACKGROUND

[0003] Products having related but varying functionalities are often sold in an individual format making it difficult for consumers to ascertain the number of individual products needed to complete a project. For example, individual cleaning products are sold according to functionality, including type of surface to be cleaned and/or type of stain to be removed, without reference to other products that may be needed to complete a related task, such as cleaning all the components of a room, vehicle or piece of equipment.

[0004] In recognizing this problem, suppliers have bundled items necessary to complete a common task in disposable packaging. The disposable packaging is efficient for assisting consumers in selection of the correct number and identity of products. However, once the products are removed for use and the packing disposed of, information detailing the functional relationship of the products is lost, thereby requiring the consumer to commit the functional relationship and number of the products to memory for effective future use of the products in completion of a project.

### SUMMARY

[0005] In one aspect, reusable containers are described herein which, in some embodiments, can mitigate one or more disadvantages of prior packaging addressing related products of varying functionality. In some embodiments, a reusable container described herein comprises a plurality of related products of varying functionality, a handle and a plurality of receptacles, each receptacle having a construction dedicated to a single one of the related products, the construction sufficiently identifying the functionality of the single product to direct correct placement of the single product in the receptacle after removal and use of the single product by a user.

[0006] In some embodiments, the construction of each receptacle comprises labeling sufficiently identifying the functionality of the product to be positioned therein. Moreover, in some embodiments, the construction of each receptacle comprises a shape complimentary to a shape of the product to be positioned therein.

[0007] In another aspect, stand-alone display modules are described herein. A stand-alone display module, in some embodiments, comprises a frame and a plurality of first shelves having positioned thereon a reusable container, the reusable container comprising a plurality of related products of varying functionality, a handle and a plurality of receptacles, each receptacle having a construction dedicated to a single one of the related products, the construction sufficiently identifying the functionality of the single product to

direct correct replacement of the single product in the receptacle after removal and use of the single product by a user.

[0008] In some embodiments, the stand-alone module further comprises a plurality of second shelves having positioned thereon individual supply of one or more of the related products for use with receptacles of the reusable container.

[0009] In another aspect, methods of using related products of varying functionality are described herein. In some embodiments, a method of using related products of varying functionality comprises providing a reusable container comprising the related products, a handle and a plurality of receptacles, each receptacle having a construction dedicated to a single one of the related products, the construction sufficiently identifying the functionality of the single product. A first related product of a first receptacle is selected based on the functionality of the first product identified by the first receptacle construction. The first product is removed from the first receptacle and used by a user. The first product is replaced in the first receptacle based on the functionality identified by the first receptacle construction.

[0010] These and other embodiments are described in greater detail in the detailed description which follows.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0011] FIG. 1 illustrates a cut-away side-elevational view of a reusable container according to one embodiment described herein.

[0012] FIG. 2 illustrates a cut-away end-elevational view of a reusable container according to one embodiment described herein.

[0013] FIG. 3 illustrates a top plan view of a reusable container according to one embodiment described herein.

[0014] FIG. 4 illustrates a bottom plan view of a reusable container according to one embodiment described herein.

### DETAILED DESCRIPTION

[0015] Embodiments described herein can be understood more readily by reference to the following detailed description and previous and following descriptions. Elements, apparatus and methods described herein, however, are not limited to the specific embodiments presented in the detailed description. It should be recognized that these embodiments are merely illustrative of the principles the present invention. Numerous modifications and adaptations will be readily apparent to those of skill in the art without departing from the spirit and scope of the invention.

[0016] I. Reusable Container

[0017] In one aspect, reusable containers are described herein which, in some embodiments, can mitigate one or more disadvantages of prior packaging addressing related products of varying functionality. In some embodiments, a reusable container described herein comprises a plurality of related products of varying functionality, a handle and a plurality of receptacles, each receptacle having a construction dedicated to a single one of the related products, the construction sufficiently identifying the functionality of the single product to direct correct placement of the single product in the receptacle after removal and use of the single product by a user. A reusable container described herein is operable to maintain the functional relationship of products, thereby enabling a user to easily determine effective selection, use and number of the products in completing a task or project. Further, in comprising related products of varying function-

ality, reusable containers described herein are intended for retail sale as well as post-retail organizational applications.

**[0018]** Turning now to specific components, a container described herein comprises a plurality of related products of varying functionality. Any desired products of varying functionality related to one another under a common theme or use can be used in containers described herein. In some embodiments, products of a container described herein are cleaning products, wherein the each of the cleaning products has a different functionality. In one embodiment, for example, each of the cleaning products is directed to treating a particular or specific surface type. In another embodiment, each of the cleaning products is directed to removing or treating a particular or specific stain or soil type.

**[0019]** In addition to cleaning, products of varying functionality can fall under one or more relating themes of painting, staining, waxing, tooling for one or more applications, agricultural, yard or gardening applications, equipment maintenance, vehicle, boat or airplane maintenance, sports equipment, pet care applications and body care applications. In some embodiments, a relating theme does not include food for human consumption.

**[0020]** In some embodiments, related products of varying functionality comprise primary individual packaging independent of the reusable container. Related products in liquid, particle, gaseous or other flowable form, in some embodiments, are provided in bag, bottle or can format for placement in receptacles of the reusable container. As described further herein, primary individual packaging of a related product, in some embodiments, can assist a user in correctly identifying the functionality of the product. In some embodiments, primary individual packaging of a related product is used in conjunction with the construction of the receptacle in which the related product is positioned to assist a user in correctly identifying the functionality of the product.

**[0021]** In addition to related products of varying functionality, a container described herein comprises a plurality of receptacles, each receptacle having a construction dedicated to a single one of the related products, the construction sufficiently identifying the functionality of the single product to direct correct placement of the single product in the receptacle after removal and use of the single product by a user.

**[0022]** A receptacle of container described herein can have any desired construction for sufficiently identifying the functionality of the single product positioned therein. In some embodiments, the construction of each receptacle comprises exterior labeling sufficiently identifying the functionality of the product positioned therein. The labeling can comprise text of a sufficiently large font size permitting facile reading by a user of the container. In some embodiments, labeling of a receptacle comprises one or more colors, images and/or signs identifying or assisting in the identification of the functionality of the product positioned therein.

**[0023]** Additionally, in some embodiments, the construction of a receptacle comprises a shape complimentary to a shape of the product to be positioned therein. In one embodiment, for example, a receptacle comprises a shape complimentary to the primary individual packaging of the product to be positioned in the receptacle. In comprising a complimentary shape unique to the product to be positioned therein, the receptacle can reject attempts of a user to place an incorrect product in the receptacle. Complimentary receptacle shape, in some embodiments, is used in conjunction with receptacle labeling to sufficiently identify the functionality of a related

product and direct correct replacement of the product in the receptacle after removal and use of the product by a user.

**[0024]** A reusable container described herein can have any desired number of receptacles. In some embodiments, a container has an even number of receptacles such as 2, 4, 6, 8, 10 or 12 receptacles. In some embodiments, wherein the container comprises an even number of receptacles, the receptacles are arranged in pairs along a midline of the container. As described herein, the receptacles can have any desired size and/or shape depending on the spatial dimensions of the related products to be disposed in the receptacles.

**[0025]** A reusable container described herein also comprises a handle permitting transport of the container by a user. In some embodiments, the handle is provided along the midline of the container, thereby permitting related product of the receptacles to counterbalance one another during transport of the container by a user. Additionally, in some embodiments, the handle comprises one or more secondary structures that can facilitate transporting or securing the container. In some embodiments, for example, one or more clips or clasps can be coupled to the handle. The clip(s) or clasp(s) can couple with another article such as rope, band or ring for transporting or securing the reusable container.

**[0026]** In some embodiments, the bottom surface of a reusable container described herein is textured. For example, in some embodiments, the bottom surface of the reusable container is textured with rubber or other material adherent to various surfaces in order to inhibit or prevent undesired movement of the reusable container once placed on a surface by a user. In some embodiments, the bottom surface can be textured in any desired pattern.

**[0027]** A reusable container described herein, including the component container parts, can be fabricated from any desired material not inconsistent with the objectives of the present invention. In some embodiments, the reusable container is fabricated from a cellulosic-based material. In one embodiment, for example, the reusable container is fabricated from cardboard. The cardboard, in some embodiments, is treated with one or more chemical species, such as a fluorochemical, to render the cardboard water repellent and/or stain repellent. Alternatively, the reusable container can be fabricated from one or more polymeric materials including, but not limited to, polyethylene, polypropylene, polystyrene, polyethylene terephthalate or polyacrylate (PAA, PMA, PMMA). The reusable container, in some embodiments, is a combination of cellulose-based materials and polymeric materials. In some embodiments, for example, the reusable container is a laminate incorporating layers cellulose-based materials and polymeric materials.

**[0028]** FIG. 1 illustrates a cut-away side elevational view of a reusable container according to one embodiment described herein. The container (10) illustrated in FIG. 1 comprises a plurality of related products of varying functionality (11, 12, 13). Each of the related products (11, 12, 13) is positioned in a respective receptacle (14, 15, 16) having a construction dedicated to the single product (11, 12, 13) positioned therein. The construction sufficiently identifies the functionality of the product (11, 12, 13) to direct correct placement of the product (11, 12, 13) in the respective receptacle (14, 15, 16) after removal and use of the product (11, 12, 13) by a user. In some embodiments, each of the receptacles (14, 15, 16) comprises exterior labeling (17, 18 19) sufficiently identifying the functionality of the respective product (11, 12, 13) positioned therein. Although FIG. 1 is a cut away view of the reusable

container, labeling elements (17, 18, 19) are associated with exterior surfaces of the respective receptacles (14, 15, 16) and not exterior surfaces of products (11, 12, 13).

[0029] Further, each related product (11, 12, 13) can also have individual labeling or packaging (17', 18', 19') working in conjunction with the receptacle exterior labeling (17, 18, 19) for assisting a user in correctly identifying the functionality of the product (11, 12, 13) and subsequent replacement of the product (11, 12, 13) in the correct receptacle (14, 15, 16). Further, the container (10) comprises a handle (20) of trapezoidal geometry along the midline of the container (10). In some embodiments, the handle (20) can separate receptacles on the opposing side of the container (not shown) from receptacles (14, 15, 16),

[0030] FIG. 2 illustrates a cut-away end-elevational view of the reusable container (10) of FIG. 1. As provided in FIG. 2, receptacle (14) is paired with product receptacle (21) across the midline (23) and handle (20) of the container (10). The opposing receptacle (21) comprises a related product (22) having a function varying from product (11), wherein the construction of the receptacle (21) sufficiently identifies the functionality of the product (22). In some embodiments, paired receptacle (21) comprises exterior labeling (24) sufficiently identifying the functionality of the product (22). Moreover, the product (22) can also display exterior labeling (24') working in conjunction with the receptacle exterior labeling (24) for assisting a user in correctly identifying the functionality of the product (22) and subsequent correct replacement of the product (22) in the receptacle (21) after removal and use by the user.

[0031] FIG. 3 illustrates a top plan view of the reusable container (10) of FIG. 1. As illustrated in FIG. 3, the container further comprises receptacle (31) paired with receptacle (15) across the midline (23) of the container (10). Additionally, receptacle (32) is paired with receptacle (16) across the midline (23) of the container. Receptacles (31, 32) comprise a related product (33, 34) respectively and have constructions sufficiently identifying the functionalities of the products (33, 34). In some embodiments, receptacles (31, 32) comprise exterior labeling sufficiently identifying the functionality of the products (31, 32). Moreover, products (33, 34) can also display exterior labeling working in conjunction with their respective receptacle (31, 32) exterior labeling for assisting a user in correctly identifying the functionalities of the products (33, 34) and subsequent correct replacement of the products (33, 34) in their respective receptacles (31, 32) after removal and use.

[0032] FIG. 4 illustrates a bottom plan view of the reusable container (10) of FIG. 1. As illustrated in FIG. 4, the bottom (41) of the container is textured with a pattern (42). In some embodiments, the textured pattern (42) is formed of an adherent material such as rubber for inhibiting or precluding movement or sliding of the container (10) subsequent to placement of the container on a surface.

## [0033] II. Stand-Alone Display Module

[0034] In another aspect, stand-alone display modules are described herein. A stand-alone display module, in some embodiments, comprises a frame and a plurality of first shelves having positioned thereon a reusable container, the container comprising a plurality of related products of varying functionality, a handle and a plurality of receptacles, each receptacle having a construction dedicated to a single one of the related products, the construction sufficiently identifying the functionality of the single product to direct correct

replacement of the single product in the receptacle after removal and use of the single product by a user. A container positioned on a first shelf of a stand-alone module can have any property and/or construction described in Section I hereinabove.

[0035] In some embodiments, the stand-alone module further comprises a plurality of second shelves having positioned thereon individual supply of one or more of the related products for use with receptacles of the reusable container. As a result, consumers can obtain individual supply of one or more of the related products for use with a previously purchased container.

[0036] The stand-alone display module, in some embodiments, has dimensions suitable for interfacing with and/or incorporating into existing product display apparatus and architecture of a retail outlet. In being compatible with existing product display architecture of a retail outlet, a stand-alone display comprising containers of related products described herein can obviate the need for product stocking or placement on shelves by personnel.

## [0037] III. Methods of Using Related Products

[0038] In another aspect, methods of using related products of varying functionality are described herein. In some embodiments, a method of using related products of varying functionality comprises providing a reusable container comprising the related products, a handle and a plurality of receptacles, each receptacle having a construction dedicated to a single one of the related products, the construction sufficiently identifying the functionality of the single product. A first related product of a first receptacle is selected based on the functionality of the first product identified by the first receptacle construction. The first product is removed from the first receptacle and used by a user. The first product is replaced in the first receptacle based on the functionality identified by the first receptacle construction.

[0039] In some embodiments, the container, related products and receptacles can any properties and/or construction described in Section I hereinabove. In some embodiments, for example, each of the related products has individual primary packaging used in conjunction with the construction of the container receptacle in which the related product is positioned to assist a user in correctly identifying the functionality of the product for selection and correct replacement of the product after use.

[0040] Various embodiments of the invention have been described in fulfillment of the various objectives of the invention. It should be recognized that these embodiments are merely illustrative of the principles of the present invention. Numerous modifications and adaptations thereof will be readily apparent to those skilled in the art without departing from the spirit and scope of the invention,

That which is claimed is:

### 1. A reusable container comprising:

a plurality of related products of varying functionality;

a handle and;

a plurality of receptacles, each receptacle having a construction dedicated to a single one of the related products, the construction sufficiently identifying the functionality of the single product to direct correct replacement of the single product in the receptacle after removal and use of the single product by a user.

2. The reusable container of claim 1, wherein the construction comprises labeling sufficiently identifying the functionality of the single product positioned therein.



3. The reusable container of claim 2, wherein the single product comprises labeling complimentary to the labeling of the receptacle for the single product.

4. The reusable container of claim 1, wherein the construction comprises a shape complimentary to a shape of the single product positioned therein.

5. The reusable container of claim 1, wherein the related products are cleaning products for various materials or surfaces.

6. The reusable container of claim 1, wherein the related products are cleaning products for treatment of various stains on a surface.

7. The reusable container of claim 5, wherein each of the cleaning products is directed to treating a different material or surface.

8. The reusable container of claim 6, wherein each of the cleaning products is directed to treating a different stain.

9. The reusable container of claim 5, wherein the various materials and surfaces are part of a boat.

10. The reusable container of claim 3, wherein the construction has a shape complimentary to a shape of the single product positioned therein.

11. A stand-alone display module comprising:  
a frame; and

a plurality of first shelves having positioned thereon a reusable container, the container comprising a plurality of related products of varying functionality, a handle and a plurality of receptacles, each receptacle having a construction dedicated to a single one of the related products, the construction sufficiently identifying the functionality of the single product to direct correct

replacement of the single product in the receptacle after removal and use of the single product by a user.

12. The stand-alone display module of claim 11, wherein the receptacle construction comprises labeling sufficiently identifying the functionality of the single product positioned therein.

13. The stand-alone display module of claim 12, wherein the single product comprises labeling complimentary to the labeling of the receptacle for the single product.

14. The stand-alone display module of claim 11, wherein the receptacle construction comprises a shape complimentary to a shape of the single product positioned therein.

15. The stand-alone display module of claim 11, wherein the related products are cleaning products for various materials or surfaces.

16. The stand-alone display module of claim 11, wherein the related products are cleaning products for treatment of various stains on a surface.

17. The stand-alone display module of claim 15, wherein each of the cleaning products is directed to treating a different material or surface.

18. The stand-alone display module of claim 16, wherein each of the cleaning products is directed to treating a different stain.

19. The stand-alone display module of claim 15, wherein the various materials and surfaces are part of a boat.

20. The stand-alone display module of claim 11 further comprising a plurality of second shelves having positioned thereon individual supply of one or more of the related products for use with receptacles of the reusable container.

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