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(54) **PACKAGES FOR BEDDING PRODUCTS
INCLUDING MATTRESSES AND MATTRESS
TOPPERS**

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(57) **ABSTRACT**

A package for bedding products, such as mattresses and mattress toppers, includes an elongated container having a closed bottom end and an open upper end, a removeable cap covering the open upper end of the container, and a flexible bag containing a compressed bedding product disposed inside the elongated container. The bedding product contained within the flexible bag is folded in half so that a head of the bedding product is aligned with a foot of the bedding product, and rolled from one lateral edge of the bedding product to an opposite lateral edge of the bedding product. The flexible bag containing the bedding product has an air-tight seal. One or more wheels are coupled with the bottom end of the elongated container so that the package can be rolled over a surface. The elongated container may have recesses formed in an outer surface for gripping the package.





FIG. 1

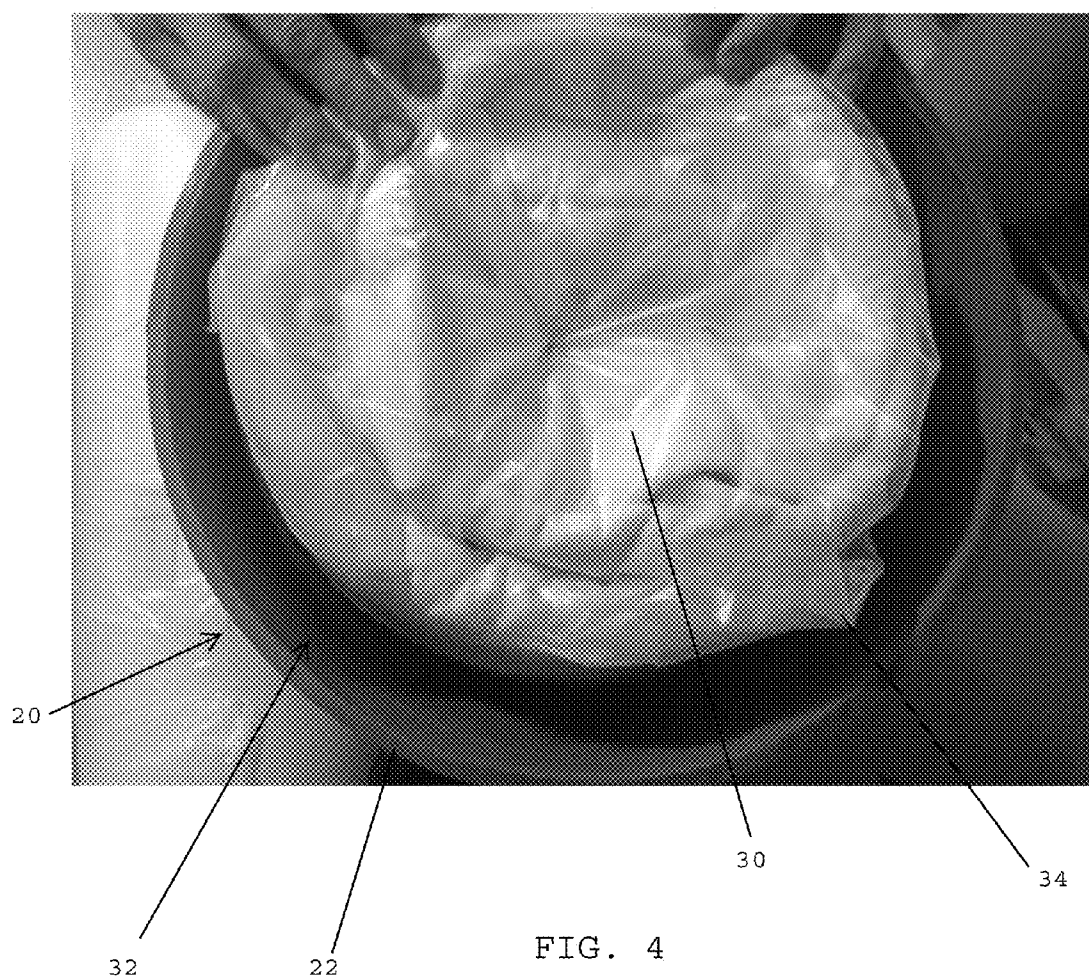


FIG. 2



28

FIG. 3



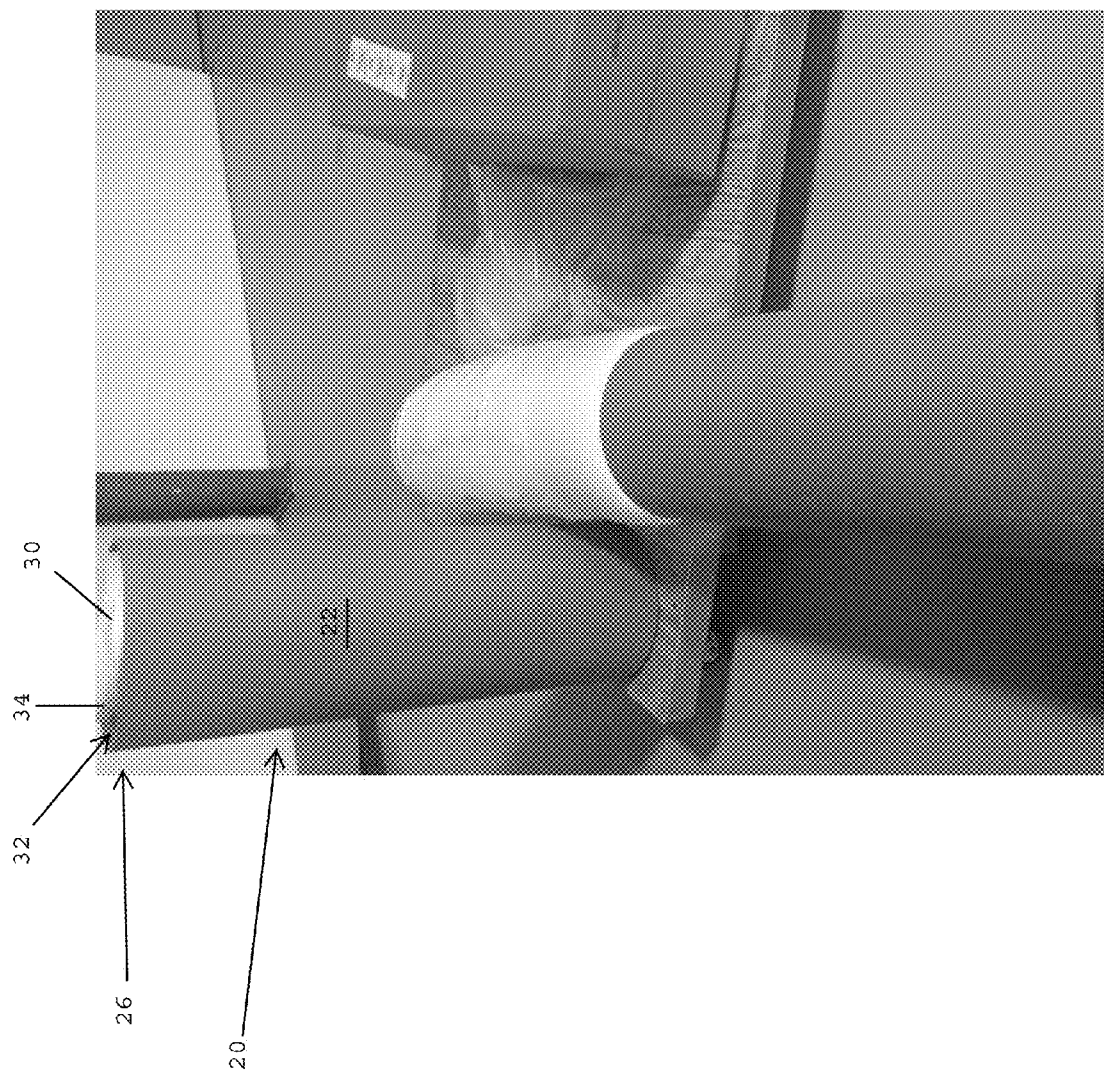


FIG. 5

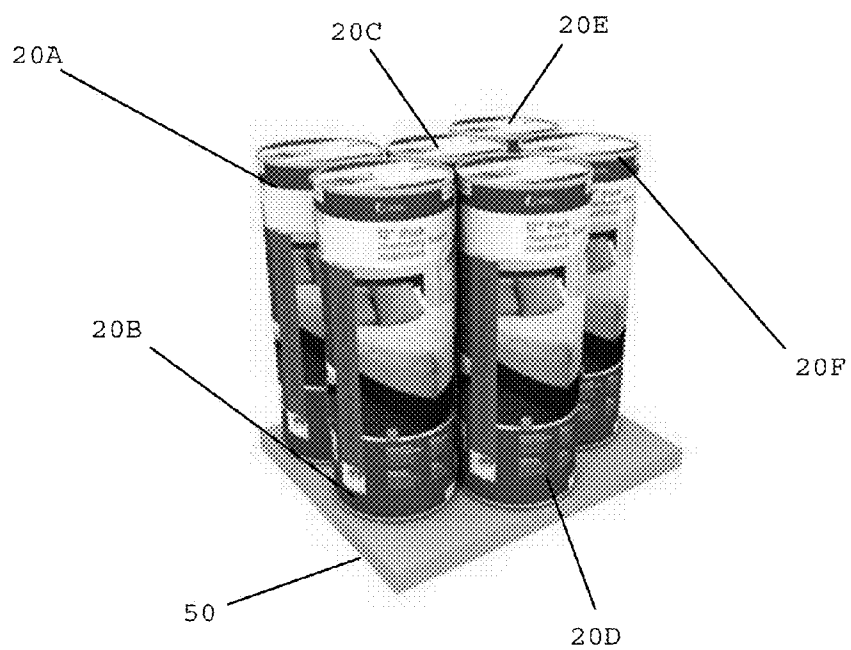


FIG. 6

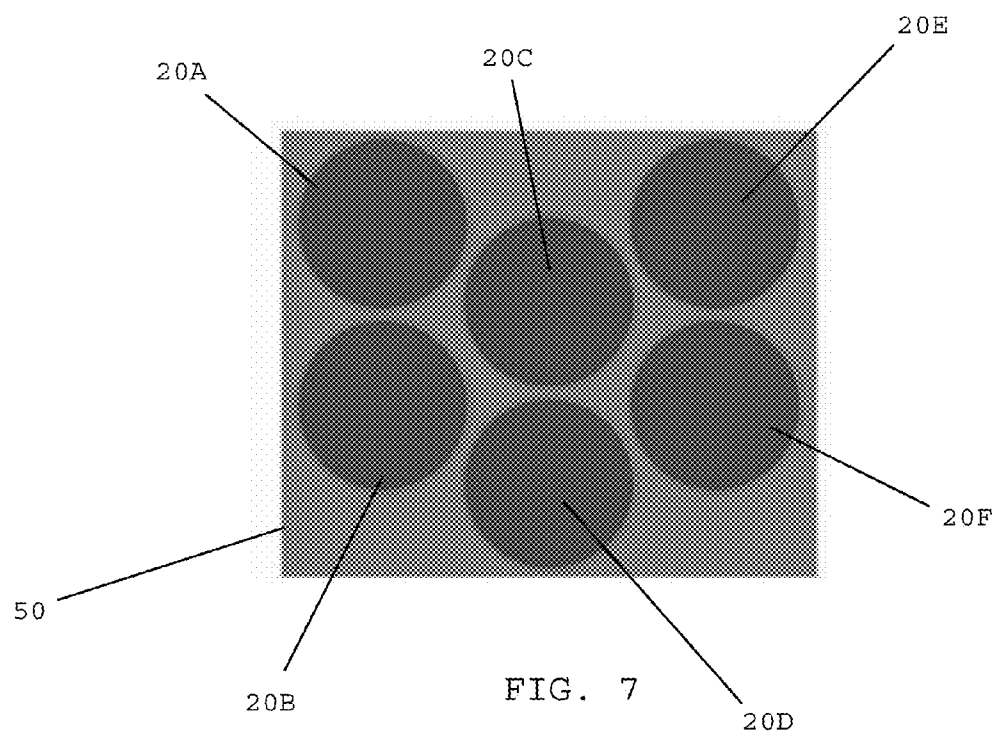


FIG. 7

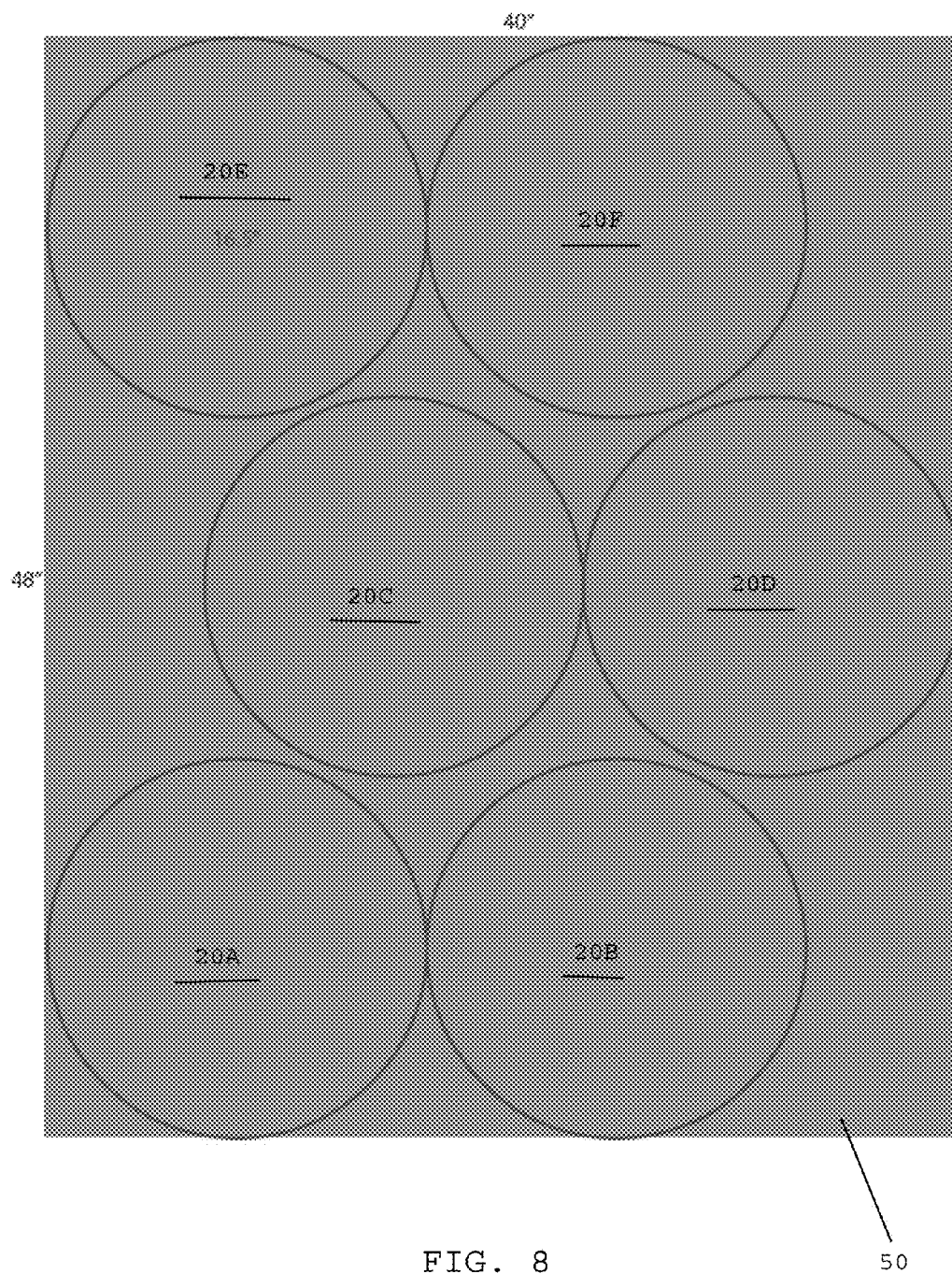


FIG. 8

50

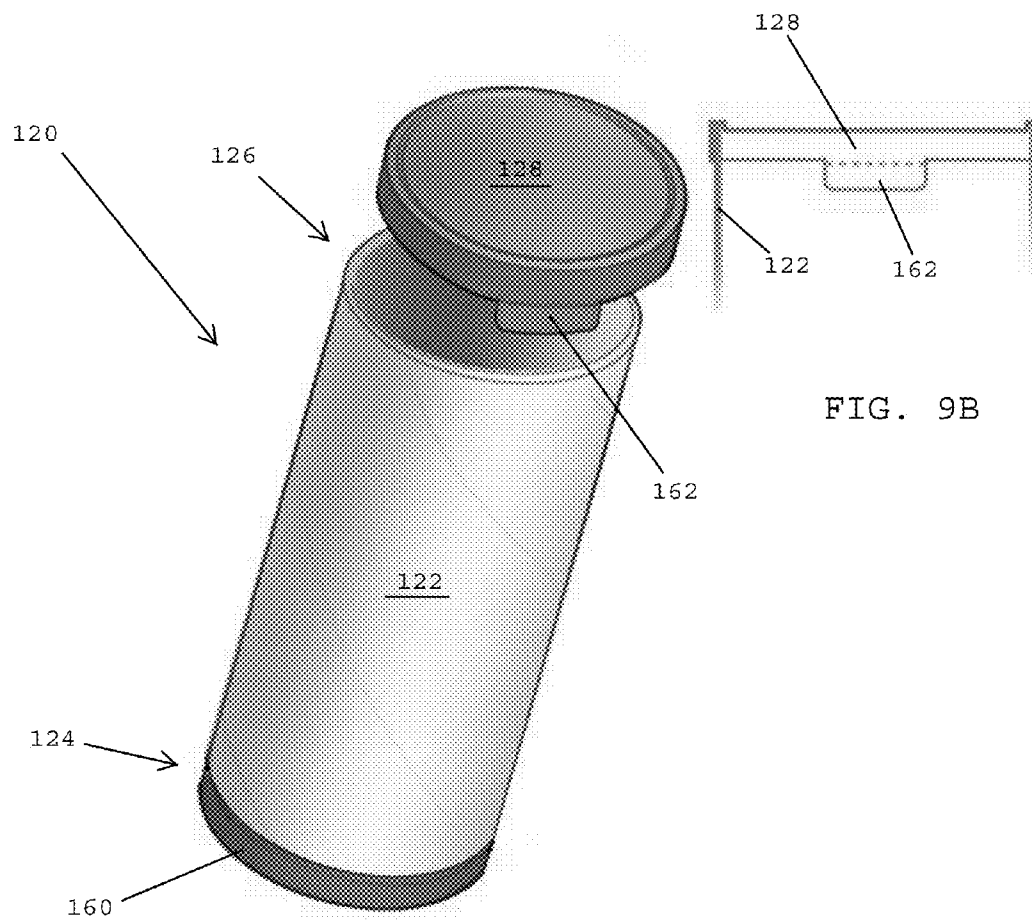


FIG. 9A

FIG. 9B

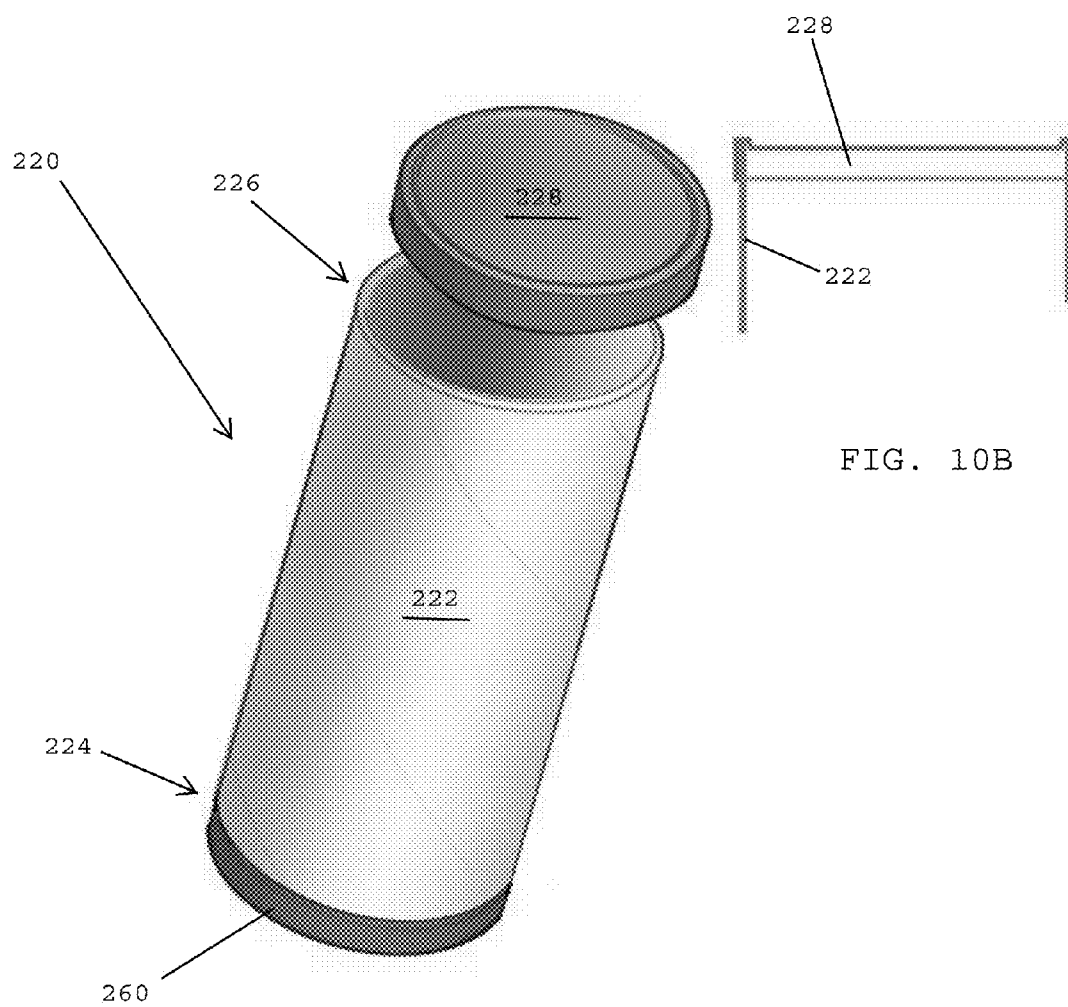


FIG. 10B

FIG. 10A

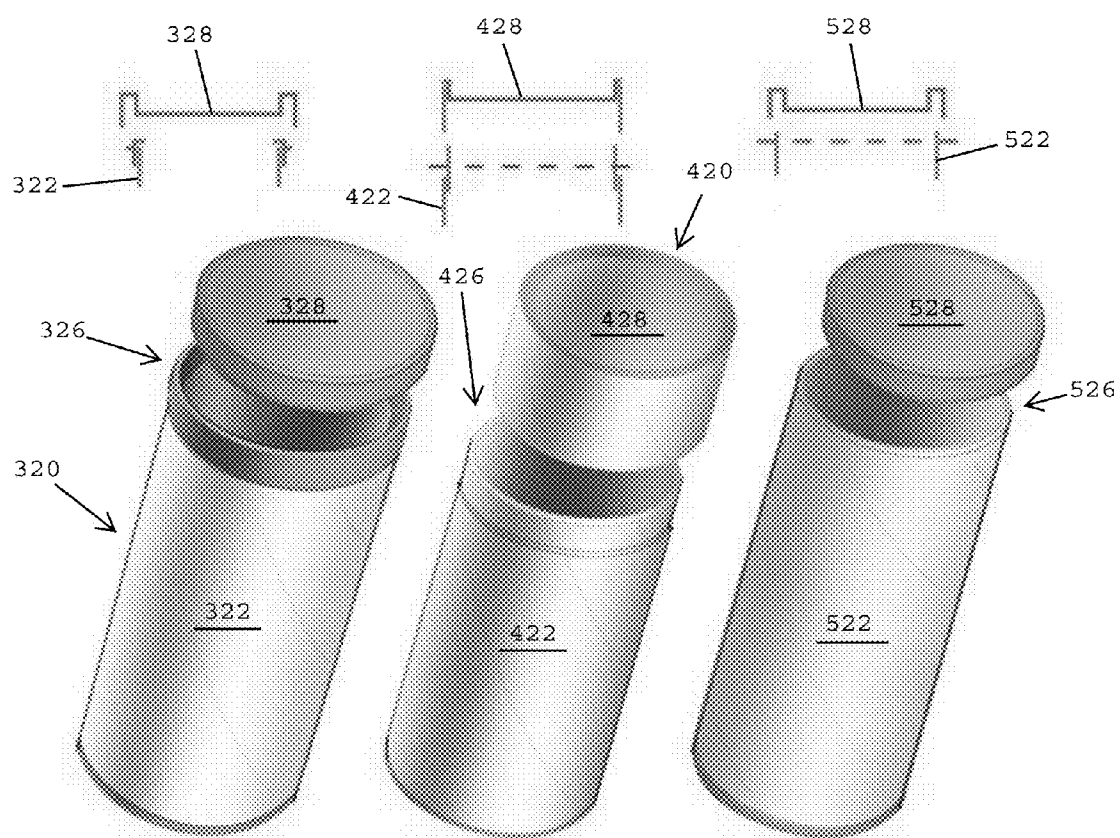


FIG. 11

FIG. 12

FIG. 13

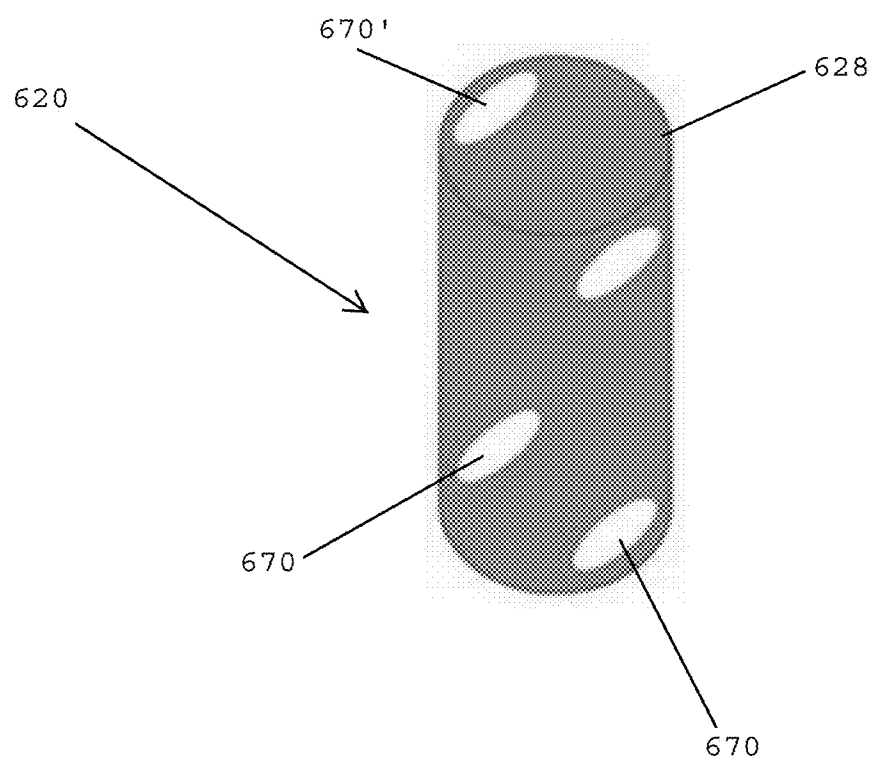


FIG. 14

FIG. 15

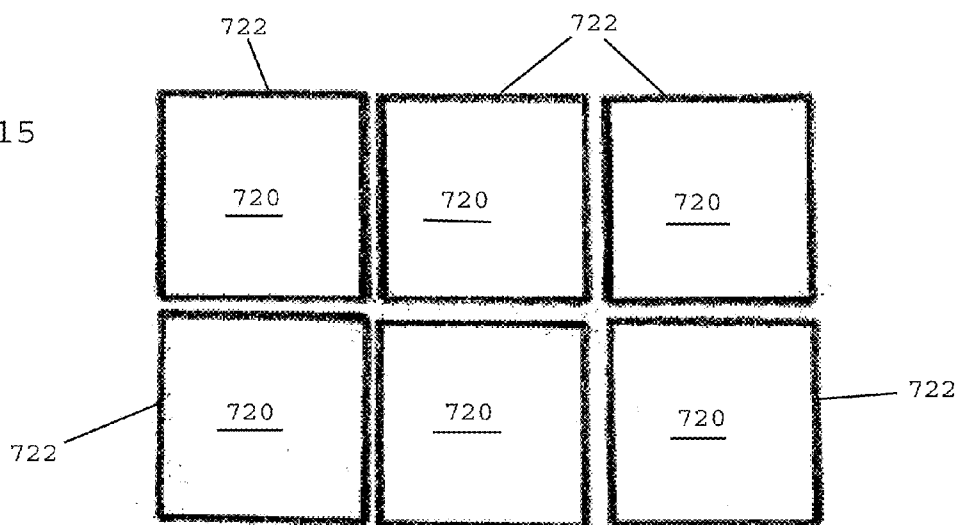


FIG. 16

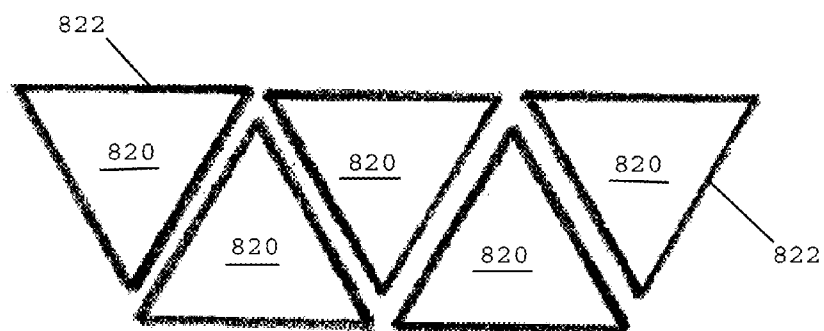


FIG. 17

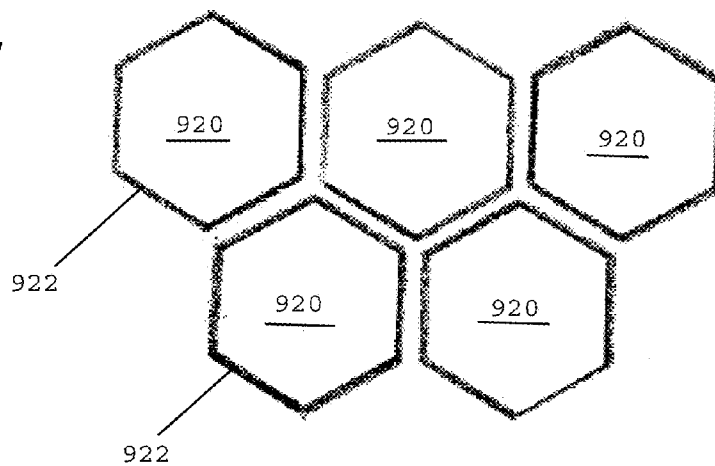


FIG. 18

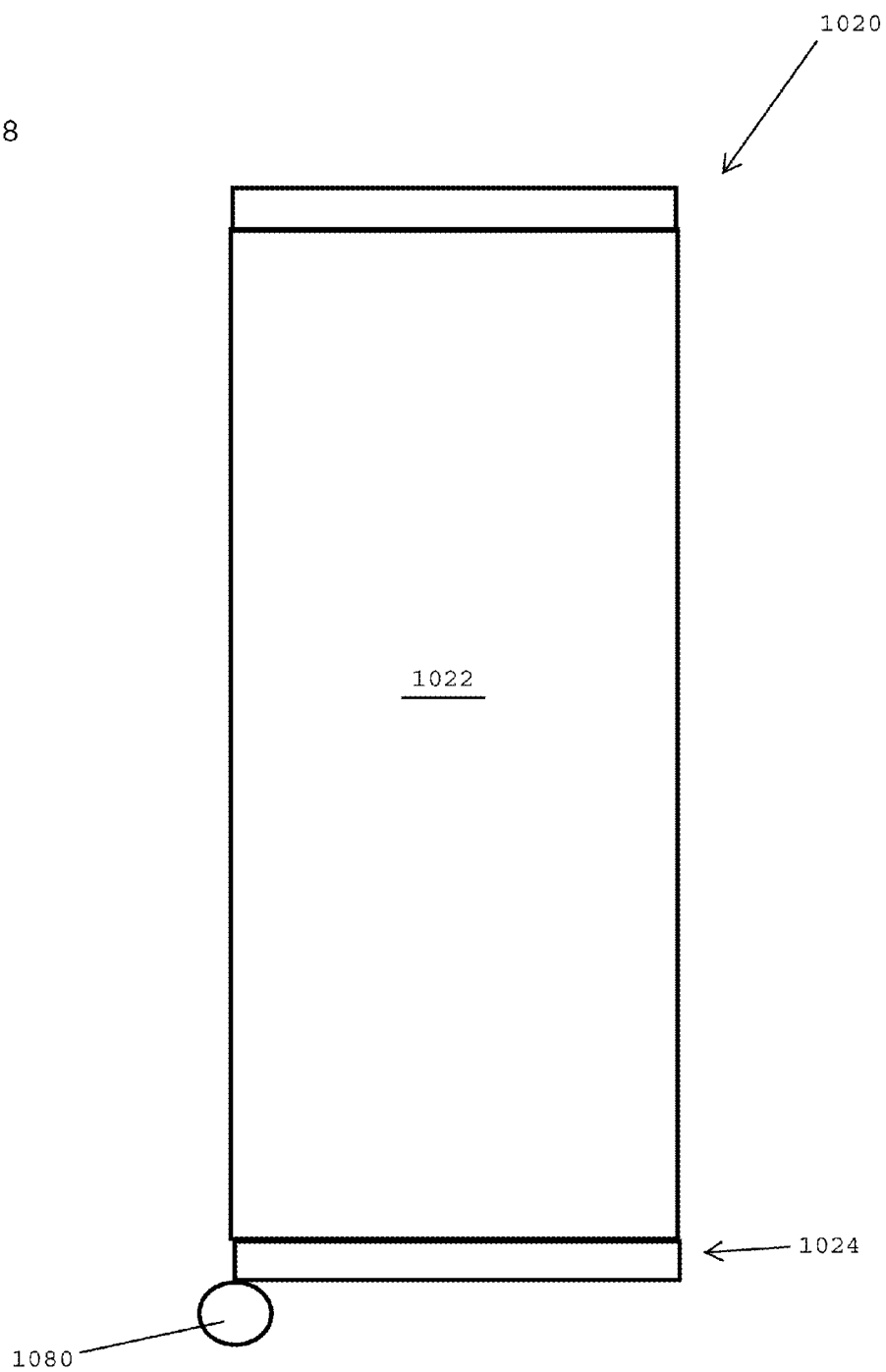
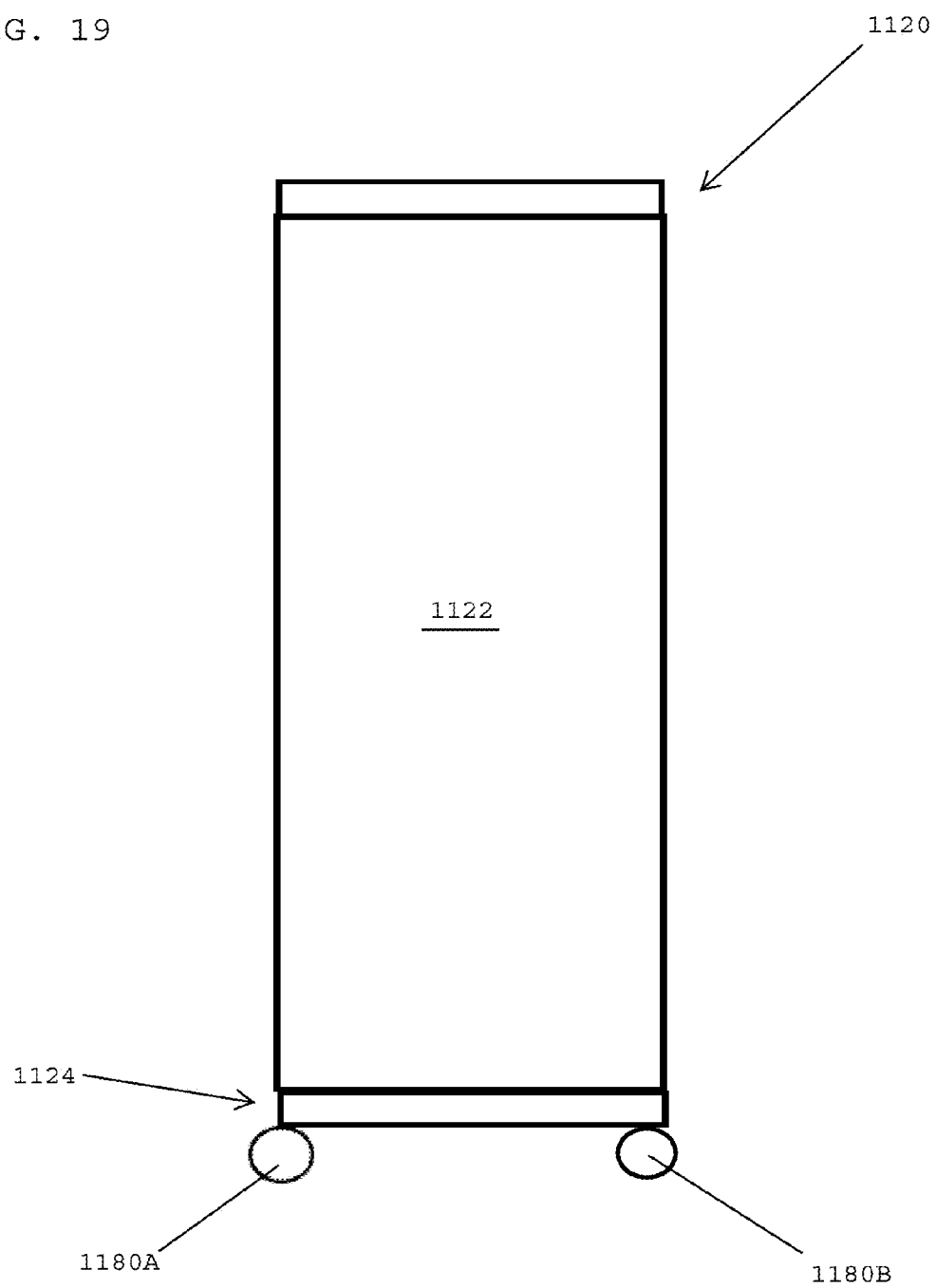


FIG. 19



PACKAGES FOR BEDDING PRODUCTS INCLUDING MATTRESSES AND MATTRESS TOPPERS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present patent application claims benefit of U.S. Provisional Application No. 61/949,979, filed Mar. 7, 2014, the disclosure of which is hereby incorporated by reference herein.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] The present application is generally directed to mattresses and mattress toppers, and is more particularly related to packages for mattresses and mattress toppers.

[0004] 2. Description of the Related Art

[0005] Mattresses are bulky items that are difficult to transport and move from a retail store to a home. Traditionally, mattresses have been packaged and sold in a flat configuration, whereby the mattresses have the same size and dimension in a store as they do when placed atop a box spring or mattress support to make a bed. Recently, there have been efforts directed to compressing mattresses before placing the mattresses in a box, and there is now an entire industry dedicated to compressing foam and coil mattresses for retail packaging.

[0006] Commonly assigned U.S. Pat. No. 8,905,412 to Michael Fux, the disclosure of which is hereby incorporated by reference herein, discloses a wheeled container for bedding products, such as mattresses, including a container having an upper end and a lower end with a bottom surface that extends to a lower edge of the container, a pair of wheels rotatably mounted to the lower edge of the container, and a handle mounted to the container, on the same side of the container as the pair of wheels. A bedding product, such as a mattress or a mattress topper, is disposed inside the container. The mattress may be a memory foam mattress that is compressed and placed in a sealed bag. The container has a storage configuration in which a bottom face of the container is parallel to the ground, and a moving configuration in which the container is tilted onto the pair of wheels for rolling the container over the ground. When the container has been rolled to a desired location, it may be returned to the upright, storage configuration.

[0007] In spite of these advances there remains a need for improved packages for bedding products such as mattresses and mattress toppers that make it easier for consumers to transport mattresses and mattress toppers from retail stores to the home. There also remains a need for packages for mattresses and mattress toppers that are easy to ship from a manufacturing location to a retail location, that are stackable, and that are re-useable after the bedding product has been removed from the package.

SUMMARY OF THE INVENTION

[0008] In one embodiment, a package for bedding products preferably includes an elongated container having a closed bottom end and an open upper end, a removeable cap covering the open upper end of the container, and a flexible bag containing a compressed bedding product, whereby the flexible bag containing the compressed bedding product is disposed inside the elongated container. In one embodiment, the

flexible bag containing the bedding product is sealed to form an air-tight parcel disposed within the elongated container.

[0009] The bedding product may be a coil mattress, a memory foam mattress, or a mattress topper. In one embodiment, the bedding product contained within the flexible bag is folded in half so that a head of the bedding product is aligned with a foot of the bedding product, and rolled from one lateral edge of the bedding product to an opposite lateral edge of the bedding product.

[0010] In one embodiment, the elongated container is an elongated tube made of paper, cardboard or cellulose, and the removeable cap is made of plastic, cellulose or metal. The elongated tube when observed from a top plan view may have various cross-sectional shapes including circles, squares, rectangles, triangles, polygons, hexagons, and/or octagons. In one embodiment, the elongated tube has a cylindrical shape and a circular cross-section.

[0011] In one embodiment, the elongated container has one or more recesses formed therein for enabling an individual to secure, hold and/or transport the package. An outer label or sheet may be placed over an outer surface of the elongated container. The label may have printed foil graphics, and the label may be fastened to the outer surface of the elongated container. In one embodiment, the elongated container may be embossed with a label or a design.

[0012] In one embodiment, a package preferably includes at least one wheel coupled with the closed bottom end of the elongated container for enabling the package to be rolled over a surface.

[0013] In one embodiment, a plurality of elongated containers may be stacked side-by-side atop a moveable structure, such as a pallet.

[0014] In one embodiment, a package for a mattress preferably includes an elongated tube having a closed bottom end and an open upper end, a removeable cap covering the open upper end of the elongated tube, and a flexible bag containing a compressed mattress, whereby the flexible bag containing the compressed mattress has an air-tight seal and is disposed inside the elongated tube.

[0015] The compressed mattress contained within the flexible bag may be folded so that a head of the compressed mattress is aligned with a foot of the compressed mattress, and rolled from one lateral edge of the compressed mattress to an opposite lateral edge of the compressed mattress.

[0016] In one embodiment, a plurality of stacked packages containing bedding products preferably includes a pallet having a top surface, a plurality of elongated containers positioned side-by-side over the top surface of the pallet, each elongated container including a closed bottom end and an open upper end, a removeable cap covering the open upper end of the elongated container, and a flexible bag containing a compressed bedding product, whereby the flexible bag containing the compressed bedding product is disposed inside the elongated container.

[0017] In one embodiment, a mattress is compressed and packed into a tube shaped container. The tube shaped container has a closed bottom end and an open top end that is covered by a cap.

[0018] In one embodiment, a memory foam mattress is folded in half so that the head of the mattress is folded to meet the foot of the mattress. The memory foam mattress is compressed. The mattress is then rolled from one lateral edge to the opposite lateral edge while being further compressed. The folded, rolled and compressed memory foam mattress is then

placed in a flexible bag, such as a plastic bag, and the bag is seal to form an air-tight package. The sealed air-tight package that contains a compressed memory foam mattress is then inserted into an open end of a tub and slid into the tube until the mattress abuts against the closed bottom end of the tube. The cap is then positioned atop the open end of the tube to close the mattress tube container.

[0019] The mattress tube containers have a smaller footprint than the size of a normal mattress which minimizes the amount of space needed for shipping and display at stores. The mattress tube containers are preferably stored in an upright vertical orientation which maximizes the number of containers that may be placed onto a pallet.

[0020] In one embodiment, the tube portion of the container is made of paper, cardboard or cellulose material and the cap is made of plastic, cellulose or metal.

[0021] In one embodiment, the outer surface of the container may have one or more recesses formed therein to enable individuals to secure, hold, and transport the mattress tube container.

[0022] In one embodiment, an outer label or sheet is placed over the outer surface of the container. The label may have printed foil graphics. The outer label or sheet may be glued or applied to the outer surface using well known fastening methodologies.

[0023] In one embodiment, the mattress tube container may be embossed with a label and/or design.

[0024] In one embodiment, one or more mattress toppers may be placed inside a container.

[0025] In one embodiment, a container has a cylindrical shape with a round cross section when observed from a top plan view. In other embodiments, the containers may have different shapes when observed from top plan views including rectangular, triangular, polygon, hexagon, octagon, or any shape that is useful for enhancing container strength or facilitating nesting of the containers adjacent one another (e.g., when stacked atop a pallet).

[0026] In one embodiment, the containers may include wheels that are mounted to lower ends of the containers for enabling the containers to be rolled over a surface for transporting from a first location to a second location. The containers may have wheels and function as described in commonly assigned U.S. Pat. No. 8,905,412 to Michael Fux, the disclosure of which is hereby incorporated by reference herein.

[0027] These and other preferred embodiments of the present invention will be described in more detail below.

BRIEF DESCRIPTION OF THE DRAWING

[0028] FIG. 1 shows a front elevation view of a package for a bedding product including an elongated container and a cap covering an upper end of the elongated container, in accordance with one embodiment of the present invention.

[0029] FIG. 2 shows a rear elevation view of the package of FIG. 1.

[0030] FIG. 3 shows a top plan view of the package shown in FIGS. 1 and 2.

[0031] FIG. 4 shows a top plan view of the package of FIG. 1 including a flexible bag containing a folded, rolled and compressed bedding product, in accordance with one embodiment of the present invention.

[0032] FIG. 5 shows a perspective view of packages for bedding products, in accordance with one embodiment of the present invention.

[0033] FIG. 6 shows a perspective view of a shipping and storage pallet and a plurality of the packages shown in FIG. 1 stacked side-by-side atop the pallet, in accordance with one embodiment of the present invention.

[0034] FIG. 7 shows a schematic top plan view of the packages and the pallet shown in FIG. 6.

[0035] FIG. 8 shows another schematic top plan view of the packages and the pallet shown in FIG. 6.

[0036] FIGS. 9A and 9B show a package for a bedding product, in accordance with one embodiment of the present invention.

[0037] FIGS. 10A and 10B show a package for a bedding product, in accordance with one embodiment of the present invention.

[0038] FIG. 11 shows a package for a bedding product, in accordance with one embodiment of the present invention.

[0039] FIG. 12 shows a package for a bedding product, in accordance with another embodiment of the present invention.

[0040] FIG. 13 shows a package for a bedding product, in accordance with yet another embodiment of the present invention.

[0041] FIG. 14 shows a package for bedding products, whereby the elongated container has recesses for gripping and transporting the package, in accordance with one embodiment of the present invention.

[0042] FIG. 15 shows a plurality of packages having elongated containers with a square cross-sectional shape, in accordance with one embodiment of the present invention.

[0043] FIG. 16 shows a plurality of packages having elongated containers with a triangular cross-sectional shape, in accordance with one embodiment of the present invention.

[0044] FIG. 17 shows a plurality of packages having elongated containers with a hexagonal cross-sectional shape, in accordance with one embodiment of the present invention.

[0045] FIG. 18 shows a package for bedding products including an elongated container having at least one wheel coupled with a lower end of the elongated container, in accordance with one embodiment of the present invention.

[0046] FIG. 19 shows a package for bedding products including an elongated container having wheels coupled with a lower end of the elongated container, in accordance with one embodiment of the present invention.

DETAILED DESCRIPTION

[0047] Referring to FIGS. 1-3, in one embodiment, a package 20 for storing bedding products, such as a compressed memory foam mattress, preferably includes an elongated container 22 having a closed bottom end 24, an open top end 26, and a lid 28 or cap that covers the opening at the top end 26 of the elongated container 22. In one embodiment, the lid 28 may be opened and removed for providing access to the container opening so that one or more bedding products may be placed into and/or removed from the elongated container 22. In one embodiment, the elongated container is an elongated tube having a cylindrical shape and a circular cross-section when observed from a top plan view. In one embodiment, the elongated tube may have other cross-sectional shapes including but not limited to square, rectangle, triangle, polygon, hexagon and octagon.

[0048] In one embodiment, the lid 28 preferably has a recess formed therein that serves as a grip for the container 20.

[0049] In one embodiment, the elongated container 22 has side walls. The outer surfaces of the side walls may be

embossed with a label or a design. In one embodiment, the lid may be embossed with a label or a design.

[0050] The package 20 is preferably designed for being stacked next to and/or atop other similarly configured packages. In one embodiment, the package 20 has a flat top, a cylindrical shaped side wall and a flat bottom. The flat top and bottom surfaces of the package enable the package 22 to be stacked atop other similarly configured and dimensioned packages.

[0051] The package 20 may be provided in different sizes (e.g., different diameters) for accommodating bedding products different sizes, e.g., King size mattresses, Queen size mattresses, twin mattresses, etc.

[0052] In one embodiment, the package 20 desirably includes a label that is a laminate including a subsurface layer having an ink label printed thereon and a transparent outer layer that covers the ink printed label. The label may include one or more of the features disclosed in U.S. Pat. No. 8,875, 875 to Michael Fux, the disclosure of which is hereby incorporated by reference herein. The transparent outer layer preferably provides a glossy appearance for the package 20. In one embodiment, the label may be a printed foil label. In one embodiment, the label may be secured to the outer surface of the elongated container 22 using glue or other well known attachment components.

[0053] Referring to FIGS. 4 and 5, in one embodiment, a bedding product such as a compressed mattress 30 is configured for insertion into the opening 32 at the top end 26 of the elongated container 22 of the package 20 (FIGS. 1-2). In one embodiment, a mattress is prepared for storage in the package 20 by first folding a memory foam mattress in half so that the head of the mattress overlies the foot of the mattress. The mattress is compressed as it is folded in half. The mattress is then rolled into a cylinder from one lateral side to an opposite lateral side, as the mattress is being further compressed. The folded, rolled and compressed mattress 30 is then placed inside a flexible bag 34 and the flexible bag is sealed to form an air-tight seal. In one embodiment, the compressed mattress 30 may be rolled around a core and held in a rolled configuration using tape.

[0054] In one embodiment, when closed, the flexible storage bag may be vacuum sealed and/or hermetically sealed. In one embodiment, the flexible storage bag 34 may have vent openings formed therein.

[0055] In one embodiment, after the bedding product has been removed from the elongated container 22, the elongated container may be re-used as a storage receptacle. Thus, in one embodiment, the present application discloses a package that minimizes waste.

[0056] Referring to FIGS. 6 and 7, in one embodiment, a plurality of packages 20A-20F containing bedding products are placed atop a shipping and storage pallet 50. Referring to FIGS. 6-8, in one embodiment, at least six packages 20A-20F may be placed atop a pallet 50 having a 40"×48" outer dimension.

[0057] FIGS. 9A-9B and 10A-10B show different designs for mattress tube containers, in accordance with various embodiments of the present invention.

[0058] Referring to FIGS. 9A-9B, in one embodiment, a package 120 for bedding products preferably includes an elongated tube 122 having a closed bottom end 124, an open upper end 126, and a cap 128 that covers the open upper end 126. The lower end of the package 120 may include a bottom piece 160 made of plastic, metal or cellulose material that

closes the lower end of the elongated tube. The cap 128 preferably includes tabs 162 that may be cut away or peeled away to release the cap from the open upper end 126 of the elongated tube 122.

[0059] Referring to FIGS. 10A-10B, in one embodiment, a package 220 for bedding products preferably includes an elongated tube 222 having a closed bottom end 224, an open upper end 226, and a cap 228 that covers the open upper end 226. The lower end of the package 220 may include a bottom piece 260 made of plastic, metal or cellulose material that closes the lower end of the elongated tube. The cap 228 is preferably taped to the upper end of the tube. When opening the package 220, the tape may be cut or peeled away to release the cap 228 from the open upper end 226 of the elongated tube 222.

[0060] Referring to FIG. 11, in one embodiment, a package 320 includes an elongated tube 322 having a cap 328 that is snap-fit to the open upper end 326 of the elongated tube 322.

[0061] Referring to FIG. 12, in one embodiment, a package 420 includes an elongated tube 422 having a cap 428 that is telescopically received over the open upper end 426 of the elongated tube. The package may include a tear-away or cut-away section for releasing the cap 428 from the elongated tube 422. The cap 428 may then be lifted away from the open upper end 426 of the elongated tube 422 for accessing the bedding products disposed within the elongated tube.

[0062] Referring to FIG. 13, in one embodiment, a package 520 includes an elongated tube 522 having a cap 528 that is taped or stapled to the open upper end 526 of the elongated tube 522.

[0063] Referring to FIG. 14, in one embodiment, a package 620 for bedding products has one or more recesses 670 that enable individuals to grip and transport the package. In one embodiment, a recess 670' is formed in the lid 628 that covers the open end of the container.

[0064] Referring to FIG. 15, in one embodiment, packages 720 for bedding products have elongated tubes 722 having square cross-sectional shapes when observed from a top plan view. The square elongated tubes 722 may be stacked side-by-side atop a surface, such as the top surface of a shipping pallet. The square cross-sectional shape of the elongated tubes and the side-by-side stacking maximizes space atop a surface, such as the top surface of a pallet.

[0065] Referring to FIG. 16, in one embodiment, packages 820 for bedding products have elongated tubes 822 having triangular cross-sectional shapes when observed from a top plan view. The triangular shaped elongated tubes 822 may be stacked side-by-side atop a surface, such as the top surface of a shipping pallet. The triangular shape of the elongated tubes and the side-by-side stacking maximizes space atop a surface, such as the top surface of a pallet.

[0066] Referring to FIG. 17, in one embodiment, packages 920 for bedding products have elongated tubes 922 having hexagonal cross-sectional shapes when observed from a top plan view. The hexagonal shaped elongated tubes 922 may be stacked side-by-side atop a surface, such as the top surface of a shipping pallet. The hexagonal shape of the elongated tubes and the side-by-side stacking maximizes space atop a surface, such as the top surface of a pallet.

[0067] Referring to FIG. 18, in one embodiment, a package 1020 for bedding products preferably has at least one wheel 1080 coupled with a closed bottom end 1024 of an elongated container 1022. In one embodiment, the elongated container may be in a vertical orientation for storage and tilted onto the

at least one wheel **1080** for rolling the package over a surface. In one embodiment, the at least one wheel enables a customer to roll the package out of a retail establishment and to a vehicle, or from the vehicle to a home or apartment.

[0068] Referring to FIG. **19**, in one embodiment, a package **1120** for bedding products preferably has a plurality of wheel **1180A**, **1180B** coupled with a closed bottom end **1124** of an elongated container **1122**. In one embodiment, the wheels **1180A**, **1180B** enable the package **1120** to be rolled over a surface. In one embodiment, the wheels enables a customer to roll the package **1120** out of a retail establishment and to a vehicle, or from the vehicle to a home or apartment.

[0069] While the foregoing is directed to embodiments of the present invention, other and further embodiments of the invention may be devised without departing from the basic scope thereof, which is only limited by the scope of the claims that follow. For example, the present invention contemplates that any of the features shown in any of the embodiments described herein, or incorporated by reference herein, may be incorporated with any of the features shown in any of the other embodiments described herein, or incorporated by reference herein, and still fall within the scope of the present invention.

What is claimed is:

1. A package for bedding products comprising:
an elongated container having a closed bottom end and an open upper end;
a removeable cap covering said open upper end of said container;
a flexible bag containing a compressed bedding product, wherein said flexible bag containing said compressed bedding product is disposed inside said elongated container.
2. The package as claimed in claim 1, wherein said bedding product is selected from the group consisting of coil mattresses, memory foam mattresses, and mattress toppers.
3. The package as claimed in claim 2, wherein said bedding product contained within said flexible bag is folded in half so that a head of said bedding product is aligned with a foot of said bedding product, and rolled from one lateral edge of said bedding product to an opposite lateral edge of said bedding product.
4. The package as claimed in claim 3, wherein said flexible bag containing said bedding product is sealed to form an air-tight parcel disposed within said elongated container.
5. The package as claimed in claim 1, wherein said elongated container comprises an elongated tube made of paper, cardboard or cellulose, and said cap is made of plastic, cellulose or metal.
6. The package as claimed in claim 5, wherein said elongated tube has a cross-sectional shape selected from the group consisting of circles, squares, rectangles, triangles, polygons, hexagons, and octagons.
7. The package as claimed in claim 5, wherein said elongated tube has a cylindrical shape and a circular cross-section.
8. The package as claimed in claim 1, wherein said elongated container has one or more recesses formed therein for enabling an individual to secure, hold or transport said package.

9. The package as claimed in claim 1, further comprising an outer label or sheet placed over an outer surface of said elongated container.

10. The package as claimed in claim 9, wherein said label comprises printed foil graphics, and wherein said label is fastened to the outer surface of said elongated container.

11. The package as claimed in claim 1, wherein said elongated container is embossed with a label or design.

12. The package as claimed in claim 1, further comprising at least one wheel coupled with said closed bottom end of said elongated container for enabling said package to be rolled over a surface.

13. The package as claimed in claim 1, further comprising a plurality of said elongated containers stacked side by side atop a moveable structure.

14. The package as claimed in claim 13, wherein said moveable structure is a pallet.

15. A package for a mattress comprising:

- an elongated tube having a closed bottom end and an open upper end;
- a removeable cap covering said open upper end of said elongated tube;
- a flexible bag containing a compressed mattress, wherein said flexible bag containing said compressed mattress has an air-tight seal and is disposed inside said elongated tube.

16. The package as claimed in claim 15, wherein said compressed mattress contained within said flexible bag is folded so that a head of said compressed mattress is aligned with a foot of said compressed mattress and rolled from one lateral edge of said compressed mattress to an opposite lateral edge of said compressed mattress.

17. The package as claimed in claim 15, wherein said elongated tube comprises paper, cardboard or cellulose, and said cap comprises plastic, cellulose or metal.

18. The package as claimed in claim 15, wherein said elongated tube has a cross-sectional shape selected from the group consisting of circles, squares, rectangles, triangles, polygons, hexagons, and octagons.

19. The package as claimed in claim 15, wherein said elongated tube has one or more recesses formed therein for enabling an individual to secure, hold or transport said package, and wherein said package further comprises at least one wheel coupled with said closed bottom end of said elongated tube for enabling said package to be rolled over a surface.

20. A plurality of stacked packages containing bedding products comprising:

- a pallet having a top surface;
- a plurality of elongated containers positioned side by side over the top surface of said pallet, each said elongated container comprising
- a closed bottom end and an open upper end;
- a removeable cap covering said open upper end of said elongated container;
- a flexible bag containing a compressed bedding product, wherein said flexible bag containing said compressed bedding product is disposed inside said elongated container.

* * * * *