US 20150013068A1

(19) United States

(12) Patent Application Publication

Werthaiser

(10) Pub. No.: US 2015/0013068 A1

(43) Pub. Date: Jan. 15, 2015

(54) **SEGREGATED, MULTIPLE-FILL COMFORTER**

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(21) Appl. No.: **14/329,064**

(22) Filed: **Jul. 11, 2014**

Related U.S. Application Data

(60) Provisional application No. 61/845,018, filed on Jul. 11, 2013.

Publication Classification

(51) **Int. Cl.**
A47G 9/02 (2006.01)

(52) **U.S. Cl.**
CPC *A47G 9/0223* (2013.01)
USPC **5/502**; 29/91.1

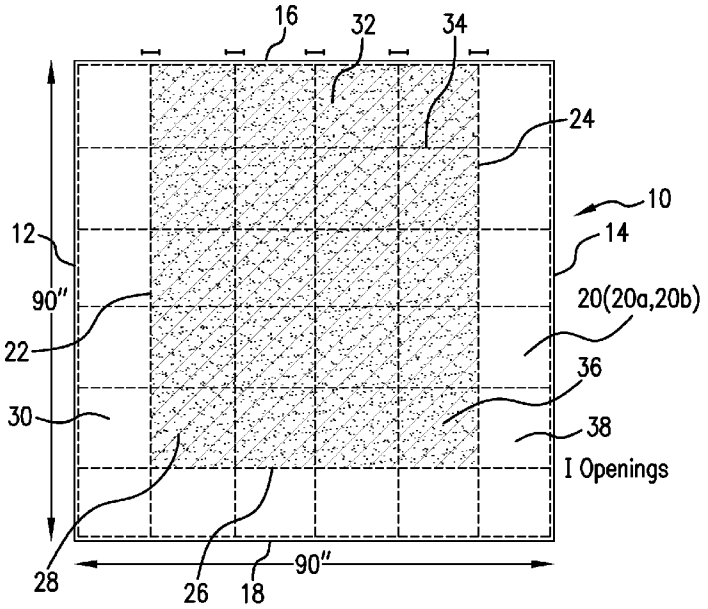
(57) **ABSTRACT**

A comforter comprising at least a top and a bottom outer shell fabric panels joined together about their peripheral edges and interiorly to form at least a first portion filled with a first filling material comprising down or a down-like material, and a second portion filled with a second filling material comprising a non-down or non-down-like material, where the first portion and the second portion are segregated. In various embodiments, the first portion comprises a central area of the comforter and the second portion comprises a peripheral area of the comforter.

Core Down v.1

Center baffle chambers are filled with 1 type of fill. The outer and bottom chambers are filled with a different fill.

Concept is to put the high quality fill only in the areas used by the end consumer.



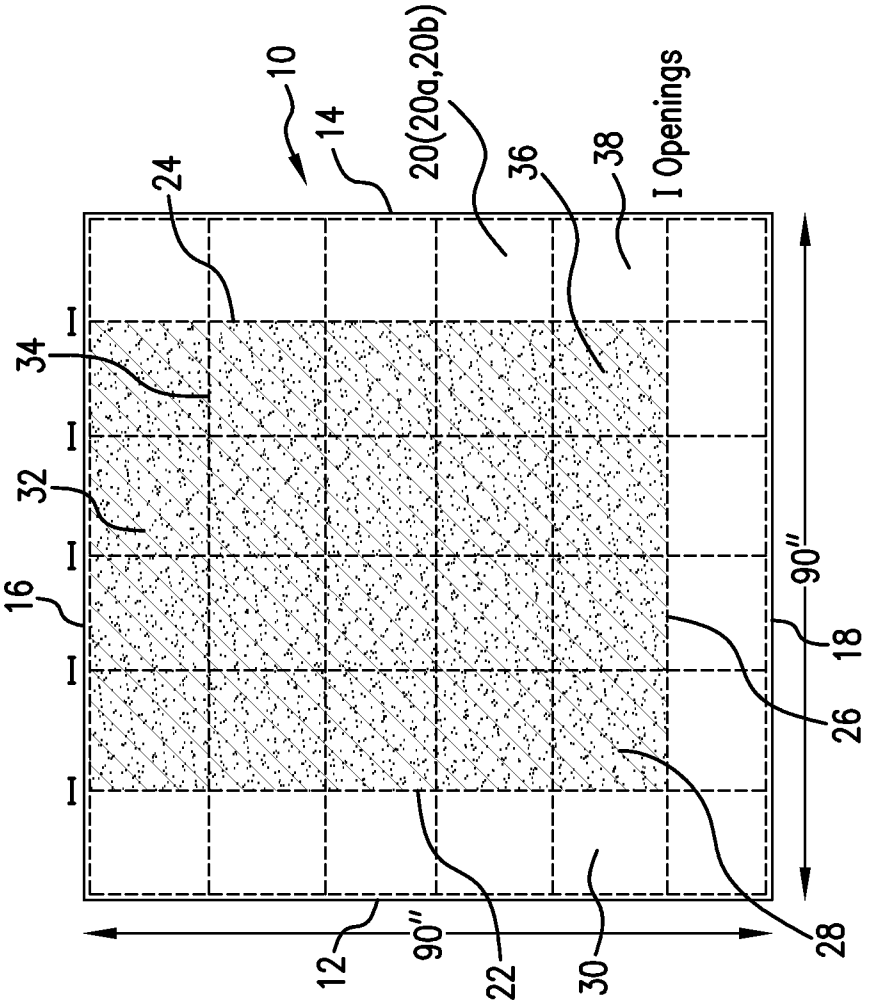


FIG. 1

Core Down v.1

Center baffle chambers are filled with 1 type of fill. The outer and bottom chambers are filled with a different fill.

Concept is to put the high quality fill only in the areas used by the end consumer.

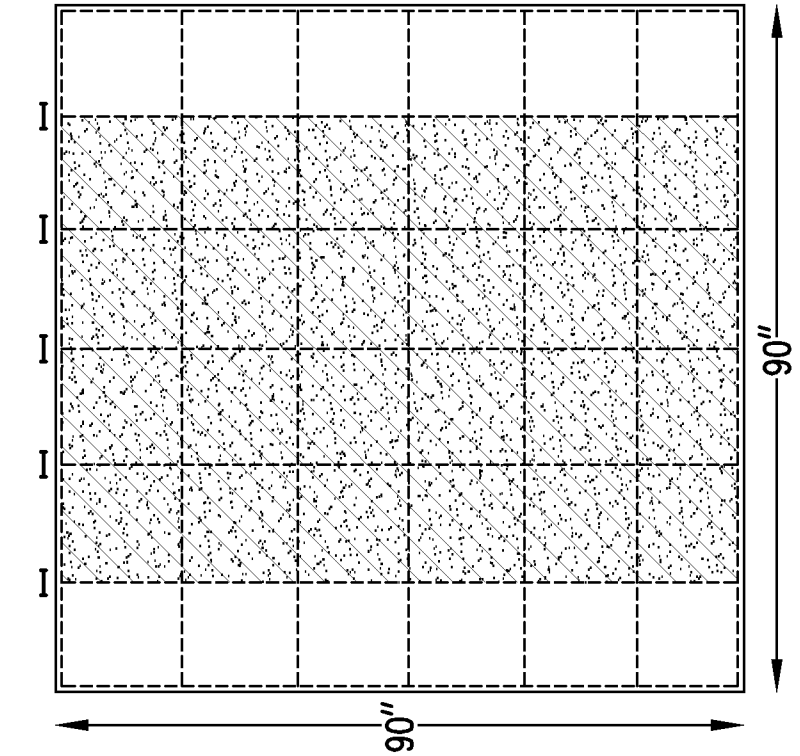


FIG. 2

Core Down v.2

Center baffle chambers are filled with 1 type of fill. The outer chambers are filled with a different fill.

Concept is to put the high quality fill only in the areas used by the end consumer.

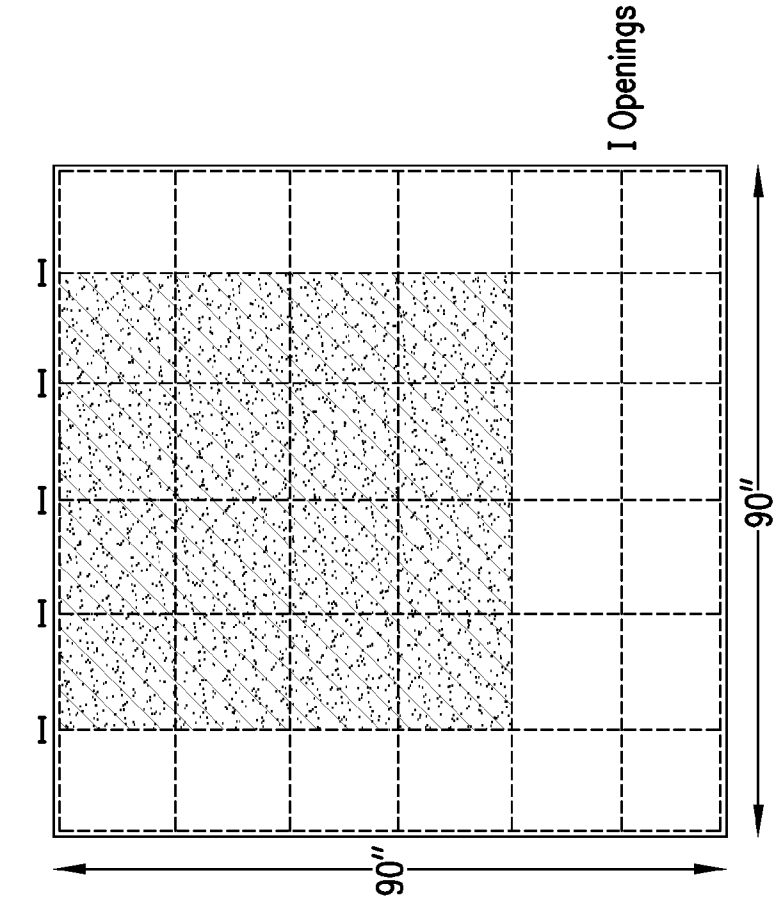


FIG. 3

Core Down v.1

Center baffle chambers are filled with 1 type of fill. The outer and bottom chambers are filled with a different fill.

Concept is to put the high quality fill only in the areas used by the end consumer.

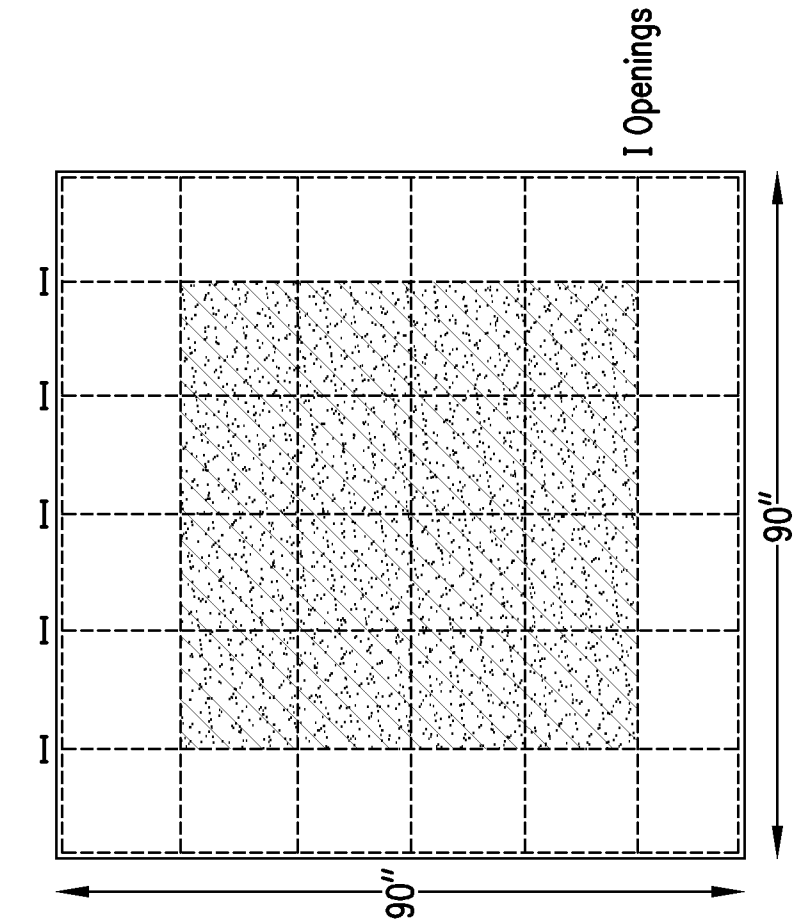


FIG.4

Core Down v.4

Center baffle chambers are filled with 1 type of fill. The outer and bottom chambers are filled with a different fill.

Concept is to put the high quality fill only in the areas used by the end consumer.

SEGREGATED, MULTIPLE-FILL COMFORTER

TECHNICAL FIELD

[0001] A comforter filled with a first material, such as down or down-like material, and a second material is provided, and more particularly to a comforter wherein the first fill is contained within a first portion of the comforter and the second fill is contained within a second portion of the comforter, where the first and second portions are segregated.

BACKGROUND

[0002] Comforters stuffed with down or down-like fill material are very popular for a number of reasons. They are warm and comfortable. Furthermore, they are characterized by bulk and softness. Finally, despite their bulk, they are extremely light in weight.

[0003] In general, the construction of the comforter, the type of fill material used, and the amount of fill material used, will determine the warmth characteristics of the structure. To this end, it is not unusual for manufacturers to offer various types and styles of comforters, differing in the fill material used and the amount of fill material used, so as to have different warmth characteristics.

[0004] Although down is the generally preferred comforter filling, it does present some drawbacks, including a relatively higher cost compared to other fill materials. In addition, although down provides excellent warmth characteristics, the entire comforter does not need to provide these premium features as a user is generally only covered by a portion of the comforter. It would be desirable, therefore, to produce a comforter which costs less to produce by decreasing the overall amount of down filling used, yet provides similar comfort levels to a user by providing down filling in a portion or portions of the comforter which would cover a user, and to provide another fill material in the remaining portion or portions of the comforter. Additionally, it is also desirable to produce such a segregated, multiple-filled comforter such that its appearance is substantially the same as a comforter filled entirely with down.

SUMMARY

[0005] In one aspect, a comforter comprising an outer fabric shell comprising a first portion containing a fill of down or down-like material and a second portion containing a non-down material is provided. In one aspect, the first portion comprises a central area of the comforter and the second portion comprises a peripheral area of the comforter. In another aspect, the first portion comprises an inner layer of the comforter and the second portion comprises an outer layer of the comforter. The shell comprises at least a top panel and a bottom panel. The top and bottom shell panels are sewn together about their peripheral edges. The fill materials are captively located and contained between the top and bottom shell panels. In one embodiment, the top and bottom shell panels are additionally joined together along at least one seam dividing the comforter into at least two portions. In another embodiment, a middle panel is provided, and located between the upper and lower panels, such that the middle panel divides an interior volume of the comforter in the first and second portions.

[0006] In another aspect, a method of producing a comforter comprising an outer fabric shell comprising a first compartment containing a fill of down or down-like material and a second compartment containing a non-down material is provided. Inside fabric panels separate each portion within the comforter, allowing for a different fill in each portion. In various embodiments, a first fill material can be, for example, in side portions, top portion, and/or bottom portion, or a combination thereof, with a second fill material in a center portion. Various embodiments contain different rows of chambers or individual chambers filled with the second fill material to obtain a target warmth and/or weight level while the remaining rows of chambers or individual chambers are filled with the first fill material. Methods require that material separate the chambers to prevent fill of different types from shifting into surrounding chambers. Chambers are filled on chamber filling machines in either a targeted method of automatic switching between fills as each chamber is filled, or by filling necessary chambers with the second fill material and then switching to fill the remaining chambers with the first fill material.

[0007] The goal is to provide a down comforter where the core or central area is filled with down and the peripheral areas are filled with alternative fills, such as wool, polyester, cotton, and/or tencel. By concentrating down in the core, the customer is provided the warmth they need, in the sleep area, and the alternative fills provide loft at a more affordable price in areas of the down comforter that are not significantly used by the consumer for body warmth.

[0008] In an exemplary embodiment, a filled comforter is provided wherein the top and bottom shell panels are sewn together about their peripheries. The top and bottom shell panels are additionally sewn together to form frame areas, some of the frame areas comprise the first and the second portions of the comforter which contain the first and the second fill material, respectively. The comforter, or portions thereof, may be of a traditional baffle karo-step design, a traditional sewn-through karo-step design, a traditional ring stitch design, any other appropriate random flow construction, or with a uniform construction of boxes, such as baffle boxes, or PermaBaffle® boxes, or a mixture thereof. In some embodiments, the seams, along which the top and bottom shell panels are sewn together to form the frame areas, have a central interrupted portion where the top and bottom shell panels are not sewn together, but are releasably held together by appropriate fastening means such as snap-tape, or the like, as described in U.S. Pat. No. 5,199,121, which is filed herewith and incorporated herewith. As a consequence, these closable gaps in the seams forming the frame areas constitute passages enabling the fill material from one frame area to be shifted into another frame area.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. **1** is a schematized view of a comforter according to one embodiment.

[0010] FIG. **2** is a schematized view of a comforter according to another embodiment.

[0011] FIG. **3** is a schematized view of a comforter according to another embodiment.

[0012] FIG. **4** is a schematized view of a comforter according to another embodiment

DETAILED DESCRIPTION

[0013] Reference is first made to FIG. **1**, however, the described features are also found in FIGS. **2-4**, where FIGS.

2-4 represent alternative first and second portion patterns. The comforter **10** has side edges **12** and **14** and end edges **16** and **18**. End edges **16** and **18** are generally interchangeable, but for purposes of this description, end edge **16** can be considered as the head end of the comforter and end edge **18** can be considered the foot end of the comforter. The comforter comprises a fabric shell **20**. The fabric shell **20** comprises at least two co-extensive fabric panels, a top panel **20***a* and a bottom panel **20***b*. The shell panels **20***a* and **20***b* are sewn together along their peripheral edges.

[0014] The top and bottom shell panels **20***a* and **20***b* are additionally sewn along rectilinear seams inset from the comforter edges **12**, **14**, **16**, and **18** and indicated at **22**, **24**, and **26**. The stitching between the shell top and bottom panels **20***a* and **20***b*, thus far described, creates a first portion **28** defined by seams **22**, **24**, **26**, and a portion of edge **16**, and a second portion **30** located between the first portion and the edges **12**, **14**, **16**, and **18**. The second portion **30**, surrounds three sides of the first portion **28**, as shown in FIGS. **1** and **3**, surrounds two sides of the first portion **28**, as shown in FIG. **2**, or surrounds four sides of the first portion **28**, as shown in FIG. **4**. Thus, in various embodiments, the second portion **30** comprises a first and a second side portion, and optionally, a bottom portion and a top portion. In one embodiment, the side portions of the second portion, and if present, the top and bottom portions, have the same width. In another embodiment, the side portions of the second portion, and if present, the top and bottom portions, have the different widths, for example, as shown in FIG. **3**.

[0015] In one embodiment, the top and bottom shell panels **20***a* and **20***b* are additionally joined together in a karo-step design. As an example, the lines of juncture are indicated by lines **32** and **34**, however, it is understood that any desired pattern may be used, such as rectangular, square, circular, diamond, etc. patterns of stitching. In one embodiment, as is well known in the art, the top and bottom shell panels **20***a* and **20***b* are joined together at **32** and **34** by baffles. The baffles are made of any appropriate material (such as nylon netting or the like), and are sewn along their edges to the upper shell panel **20***a* and the lower shell panel **20***b*. This construction, known in the art, is generally referred to as a baffle karo-step design.

[0016] Alternatively, the upper and lower shell panels **20***a* and **20***b* may be directly sewn together along the lines **32** and **34**. Such a construction is well known in the art and is generally referred to as a sewn-through karo-step design. It will be understood that joinder of the top and bottom shell panels **20***a* and **20***b* along lines **20** can be accomplished by using either of these methods, or any other method known in the art. Regardless of whether the baffle karo-step design or the sewn-through karo-step design is used, the length of the lines **32** and **34** may be varied. The described comforter is not intended to be limited to the use of a karo-step design, as other well-known designs may be used, such as a ring stitch design, for example.

[0017] The top and bottom panels **20***a* and **20***b* of the shell **20** may be made of any appropriate material. While not intended to be so limited, 100% cotton fabric is an often used material for this purpose. Additionally, the top and bottom panels **20***a* and **20***b* need not be the same material.

[0018] In one embodiment, the comforter further comprising an additional fabric panel interposed between the top **20***a* and the bottom **20***b* outer shell fabric panels. In this manner, the first and second portions are defined by the bottom outer shell fabric panel and the additional fabric panel, and the second portion is defined by the top outer shell fabric panel and the additional fabric panel. In this embodiment, the first fill material would be coextensive with the length and width of the comforter, and adjacent to a user's body, while the second fill is coextensive with the length and width of the comforter, and distal from the user's body.

[0019] The first fill material **36** is down or a down-like material, such as feathers, or a combination of down and feathers. The second fill material **38** is a non-down or non-down-like material. In one embodiment, the second fill material is wool, polyester, cotton, tencel, or combinations thereof. In various embodiments, the second fill material is generally less expensive than the first fill material. In various embodiments, the amount of the first and the second fill materials which is inserted into the first and second portions, respectively, will be such that the first and second portions have the same apparent loft or thickness, so that on visual inspection, no difference can be detected between the first and second portions. In various embodiments, the first and/or second fill materials can be in the form of batted or blown.

[0020] In various embodiments, the sewn lines **32** and **34** may be interrupted by releasable means, forming in the seams **32** and **34** openable and reclosable gaps or passages by which fill can be moved from one frame to another frame. Any appropriate means can be used to join the upper and lower shell panels **20***a* and **20***b* together at the passages along seams **32** and **34**, so long as the means can be easily manipulated through the fabric of the top and bottom panels **20***a* and **20***b*. Such means include the well-known pressure actuated hook and loop tapes, tapes bearing equally spaced hook and eye elements, zipper means or the like. Preferably the means used is non-metallic so as to be free of rust or corrosion.

[0021] In one embodiment, the comforter comprises at least a top **20***a* and a bottom **20***b* outer shell fabric panels joined together about their peripheral edges **12**, **14**, **16**, **18**, the fabric panels defining the outer surface of the comforter and having a top edge, a bottom edge, a first side edge, and a second side edge, a first portion **28** filled with a first filling material **36** comprising down or a down-like material, and a second portion **30** filled with a second filling material **38** comprising a non-down or non-down-like material, the first portion **28** and the second portion **30** are segregated such that the first portion **28** consists essentially of the first filling material **36** and the second portion **30** consists essentially of the second filling material **38**.

[0022] In various embodiments, the top **20***a* and bottom **20***b* shell panels are additionally joined together along at least one seam dividing said comforter into at least two areas, the at least two areas comprise the first portion **28** and the second portion **30**, which are segregated by lines of stitching connecting the at least a top **20***a* and a bottom **20***b* outer shell fabric panels.

[0023] In various embodiments, the first portion **28** comprises a central area of the comforter and the second portion **30** comprises a peripheral area of the comforter. In one embodiment, the peripheral area comprises a top portion, a bottom portion, a first side portion, and a second side portion, the peripheral area outwardly defined by the top edge **16**, the bottom edge **18**, the first side edge **12**, and the second side edge **14**, and inwardly defined by the central area. In another embodiment, the peripheral area comprises a first side portion and a second side portion, the peripheral area outwardly defined by the first side edge **12**, the second side edge **14**, a portion of the top edge **16**, and a portion of the bottom edge

18, and inwardly defined by the central area. In yet another embodiment, the peripheral area comprises a first side portion, a second side portion, and a bottom portion, the peripheral area outwardly defined by the first side edge **12**, the second side edge **14**, the bottom edge **18**, and a portion of the top edge **16**, and inwardly defined by the central area.

[0024] In various embodiments, the proportion of the comforter comprising the first portion and the second portion can be varied, for example, with the first portion comprising from about 30% to about 90% of the area of the comforter, with the first portion generally located to at least partially cover a user, such as a central area. In various embodiments, the portions of the peripheral area have the same width from an outer edge to the first portion, or the width may independently vary for each of the peripheral portions, for example, the width of the bottom portion of the peripheral area may be greater than the width of the side portions. Additionally, as described above, the peripheral area may not have a top and/or bottom portion. Peripheral areas can range in width from about 3" to about 20", varying by application and fill material used.

[0025] In an additional embodiment, at least a portion of at least one seam is releasable and restorable and comprises an openable and closable passage in the seam through which fill material can be shifted between at least two areas of the comforter to adjust the amount of said fill in said areas. These openable and closable passages would be located such that the same fill material is shifted, and not to result in mixing of the first and the second fill materials.

[0026] In another aspect, the comforter further comprising an additional fabric panel interposed between the top and the bottom outer shell fabric panels. In such a construction, the first portion is defined by the bottom outer shell fabric panel and the additional fabric panel, and the second portion is defined by the top outer shell fabric panel and the additional fabric panel.

[0027] The fabric panels **20***a* and **20***b* are configured so that the completed comforter covers the desired mattress size on which the comforter is to be used, including the conventional sizes of twin, full, queen and king sizes. The completed comforter can be either approximately the size of the top of the mattress, or somewhat wider (up to 20 inches) than the top of the mattress.

[0028] In one aspect, the comforter is manufactured by creating the shell first (the top and bottom fabrics sewn together around the peripheral). In one embodiment, the shell is sewn on the peripheral edges and then sewn again interiorly between about 3" and about 20" to create a center box while leaving enough of an opening to fill the center portion. If a batted or combed fill material is to be used in the peripheral portion, the fill material will be sewn in at the time of shell assembly. If a blown fill material, fill openings are left for the peripheral portion and the center portion. The portion(s) are then filled. In one embodiment, the center portion is filled, and then sewn closed, and the peripheral portion is then filled, and the item is finished with sewing. Depending on the fills used, the filling steps may be reversed. In another embodiment, the top and bottom fabrics are sewn together (with or without a gusset fabric around the sides for added depth) with a third fabric used to create channels or boxes inside the comforter to house different fills in different portions. Boxes or channels can range in size from about 6" to about 22", varying by design requirement, fill needs, and/or finished size of the comforter. The inside fabric allows for more fill and/or higher loft while providing separation to prevent or reduce shifting between the chambers or channels. Openings are left in the shell to allow each box or channel to be filled. For prevention of fill shifting, PermaBaffle® construction can be used. Once the shell is constructed, it is moved to be filled. Filling occurs with a first fill material in the desired boxes or channels, per previous descriptions. Once these portions are filled, the remaining portions are filled with a second fill material. In one embodiment, the filling procedure is accomplished by an automated machine which fills portion(s) individually with the first or the second fill material as the operator specifies.

[0029] The result is a comforter where the core or central area is filled with down and the peripheral areas are filled with alternative fills. By concentrating down in the core, the customer receives the warmth they need, in the sleep area, while the alternative fills provide loft at a more affordable price in areas of the down comforter that are not significantly used by the consumer for body warmth.

[0030] Although a preferred embodiment of the invention has been disclosed here for the purposes of illustration, it should be understood that various changes, modifications and substitutions may be incorporated in the embodiment without departing from the spirit of the invention, which is defined by the claims which follow.

What is claimed is:

1. A comforter comprising

at least a top and a bottom outer shell fabric panels joined together about their peripheral edges, the fabric panels defining the outer surface of the comforter and having a top edge, a bottom edge, a first side edge, and a second side edge,

a first portion filled with a first filling material comprising down or a down-like material, and

a second portion filled with a second filling material comprising a non-down or non-down-like material, the first portion and the second portion are segregated such that the first portion consists essentially of the first filling material and the second portion consists essentially of the second filling material.

2. The comforter of claim **1** wherein the top and bottom shell panels are additionally joined together along at least one seam dividing said comforter into at least two areas.

3. The comforter of claim **2** wherein the at least two areas comprise the first portion and the second portion, which are segregated by lines of stitching connecting the at least a top and a bottom outer shell fabric panels.

4. The comforter of claim **1** wherein the first portion comprises a central area of the comforter and the second portion comprises a peripheral area of the comforter.

5. The comforter of claim **4** wherein the peripheral area comprises a top portion, a bottom portion, a first side portion, and a second side portion, the peripheral area outwardly defined by the top edge, the bottom edge, the first side edge, and the second side edge, and inwardly defined by the central area.

6. The comforter of claim **4** wherein the peripheral area comprises a first side portion and a second side portion, the peripheral area outwardly defined by the first side edge, the second side edge, a portion of the top edge, and a portion of the bottom edge, and inwardly defined by the central area.

7. The comforter of claim **4** wherein the peripheral area comprising a first side portion, a second side portion, and a bottom portion, the peripheral area outwardly defined by the

first side edge, the second side edge, the bottom edge, and a portion of the top edge, and inwardly defined by the central area.

8. The comforter of claim **5** wherein the peripheral area has a width from the outer edge which is substantially similar for each of the top portion, the bottom portion, the first side portion, and the second side portion.

9. The comforter of claim **6** wherein the peripheral area has a width from the outer edge which is substantially similar for each of the first side portion, and the second side portion.

10. The comforter of claim **7** wherein the peripheral area has a width from the outer edge which is substantially similar for each of the bottom portion, the first side portion, and the second side portion.

11. The comforter of claim **7** wherein the peripheral area has a width from the outer edge which is substantially similar for each of the first side portion and the second side portion, and is greater for the bottom portion.

12. The comforter of claim **1** wherein the first filling material is selected from the group consisting of down, a mixture of down and feathers, and feathers.

13. The comforter of claim **1** wherein the second filling material is selected from the group consisting of wool, polyester, cotton, tencel, and combinations thereof.

14. The comforter of claim **2** wherein at least a portion of the at least one seam being releasable and restorable comprising an openable and closable passage in said seam through which fill material can be shifted between the at least two areas of the comforter to adjust the amount of said fill in said areas.

15. The comforter of claim **1** further comprising an additional fabric panel interposed between the top and the bottom outer shell fabric panels.

16. The comforter of claim **15** wherein the first portion is defined by the bottom outer shell fabric panel and the additional fabric panel, and the second portion is defined by the top outer shell fabric panel and the additional fabric panel.

17. A method of making a comforter of claim **1**, the method comprising forming channel or box portions within the comforter, and filling desired portions with a first fill material and then filling the remaining portions with a second fill material.

18. The method of claim **17** wherein the filling is accomplished by an automated machine, such that each box or channel is filled with the first or the second fill material per operator instructions as it moves through the filling process.

* * * * *