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[Continued on nextpage]

(54) **Title:** UNITARY CUSHION COVERING

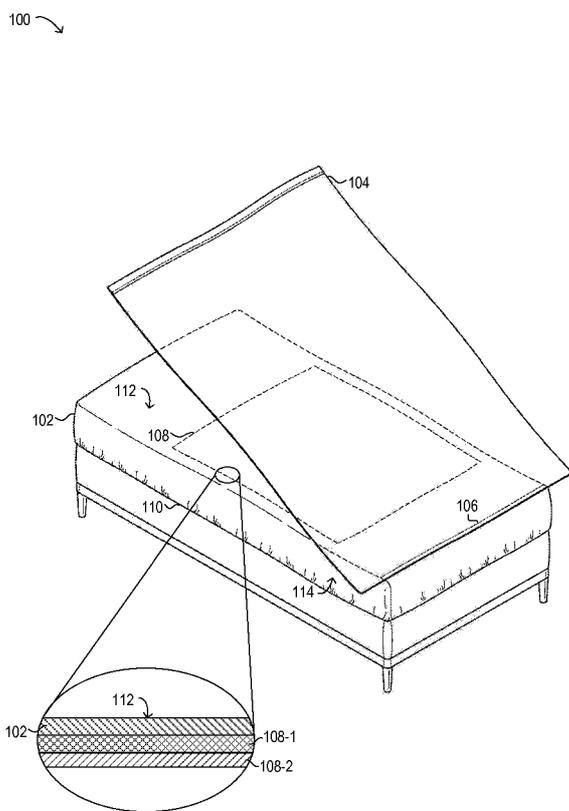


FIG. 1

(57) **Abstract:** A unitary cushion covering includes a fitted portion for covering a top surface and side surfaces of a cushion. The fitted portion is bonded to a top portion along one end. The top portion may provide a covering element for a person lying on the fitted portion. The fitted portion may include a moisture repellant layer at a top surface of the fitted portion.



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## UNITARY CUSHION COVERING

### BACKGROUND

#### Field of the Disclosure

[0001] The present disclosure relates to coverings for sleeping furniture and, specifically, to a unitary cushion covering.

#### Description of the Related Art

[0002] Various bedding items have been used for covering sleeping furniture. Typically, a bed covering may include a fitted sheet designed to cover and remain attached to a mattress. The bed covering may further include a separate top sheet for covering an individual using the mattress. However, using various individual pieces of bed coverings may be disadvantageous in terms of handling and convenience in many situations.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0003] FIG. 1 is a perspective view of selected elements of an embodiment of a unitary bed covering;

[0004] FIG. 2 is a perspective view of selected elements of an embodiment of a unitary bed covering; and

[0005] FIG. 3 is a flowchart depicting selected elements of a method for manufacturing a unitary bed covering.

**DESCRIPTION OF THE EMBODIMENT(S)**

[0006] Various bedding items have been used for covering sleeping furniture. Typically, a bed covering may include a fitted sheet designed to cover and remain attached to a mattress. The bed covering may further include a separate top sheet for covering an individual using the mattress. However, using various individual pieces of bed coverings may be disadvantageous in terms of handling and convenience in many situations.

[0007] As will be described in further detail herein, a unitary cushion covering may provide convenience and practicality by combining a top sheet with a fitted sheet. The fitted sheet may include a moisture repellant, such as a waterproof barrier. The unitary cushion covering may further reduce complexity of logistics associated with bedding supply management, by reducing a number of articles that are used in preparing bedding, which may be significant in applications such as hotelierie, hospitals, nursing facilities, long-term care, emergency housing, and/or disaster relief.

[0008] In one aspect, a disclosed unitary bed covering for a mattress includes a fitted portion covering the mattress, including a moisture resistant layer, and a top portion bonded to the fitted portion at one end of the fitted portion.

[0009] In certain embodiments, the fitted portion may cover a top surface of the mattress and four side surfaces of the mattress, while the moisture resistant layer may extend over the top surface of the mattress when the unitary bed covering is installed on the mattress. The fitted portion may extend to at least partially cover a bottom surface of the mattress, while the fitted portion may be held in place on the mattress by elastic elements at edges of the fitted portion. The moisture resistant layer may include a waterproof layer, and a sound absorbent layer. The moisture resistant layer may include a padding material. The fitted portion may include a fabric layer to which the moisture resistant layer is bonded. The top portion may be bonded to the fitted portion using a linear seam at the one end of the fitted portion. The linear seam may extend from one side of the fitted portion to another side of the fitted portion.

[0010] In another aspect, a unitary cushion covering includes a fitted sheet for covering a cushion, including a moisture repellant layer, and a top sheet bonded to the fitted sheet at one

end of the fitted sheet. The cushion may be a mattress. The moisture repellant layer may include a waterproof layer, and a sound absorbent layer. The top sheet may be bonded to the fitted sheet using a linear seam at the one end of the fitted sheet. The linear seam may extend partially along the one end of the fitted sheet.

[0011] In yet another aspect, a method of manufacturing a unitary cushion covering includes bonding a fitted portion of the unitary cushion covering with a moisture repellant layer, and bonding a top portion of the unitary cushion covering to the fitted portion at one end of the fitted portion. The moisture repellant layer may include a waterproof layer, and a sound absorbent layer.

[0012] In some embodiments, the cushion may be substantially rectangular in shape. The top portion and the fitted portion may be made of fabric. The method operation of bonding may further include sewing a seam at the one end of the fitted portion. The seam may bond an edge of the top portion to the fitted portion.

[0013] In the following description, details are set forth by way of example to facilitate discussion of the disclosed subject matter. It should be apparent to a person of ordinary skill in the field, however, that the disclosed embodiments are exemplary and not exhaustive of all possible embodiments.

[0014] Throughout this disclosure, a hyphenated form of a reference numeral refers to a specific instance of an element and the un-hyphenated form of the reference numeral refers to the element generically or collectively. Thus, for example, widget 12-1 refers to an instance of a widget class, which may be referred to collectively as widgets 12 and any one of which may be referred to generically as a widget 12.

[0015] Turning now to the drawings, FIG. 1 is a perspective view of selected elements of unitary covering **100**. Although depicted in rectangular form, unitary covering **100** may represent any of a variety of sizes and shapes suitable for covering a cushion and/or a piece of sleep furniture, such as a mattress. In FIG. 1 it will be assumed that unitary covering **100** is formed using a suitable fabric, which may be a natural fabric, a synthetic fabric, or a combination thereof. It is noted that in certain embodiments, unitary covering **100** may be made of a disposable material, such that unitary covering **100** may be discarded after use, either entirely or in part.

[0016] As shown in FIG. 1, unitary covering **100** is shown including fitted portion **102** and top portion **104**, which are joined at bond **106**. For illustrative purposes, top portion **104** is shown in a plane at an angle to top surface **112** of fitted portion **102**. A person using unitary covering **100** may rest on top surface **112** of fitted portion **102** and may use top portion **104** as a covering, for example, for warmth or comfort during sleep. Fitted portion **102** is formed with elastic elements **110** that may secure fitted portion **102** around the edges of a mattress, such that fitted portion **102** extends around the sides of the mattress and covers at least a portion of a bottom surface of the mattress (not visible in FIG. 1). It is noted that fitted portion **102** and/or top portion **104** may be made of a fabric suitable for use as a bed sheet. In various embodiments, fitted portion **102** may be made using an elasticized fabric.

[0017] As shown in FIG. 1, fitted portion **102** includes moisture repellant **108**, which may be formed as a layer at top surface **112** of fitted portion **102**. Moisture repellant **108** may be formed as a unitary material layer with desired properties, such as, moisture repelling, soundproofing, waterproofing, odor neutralizing, insulating, etc. As shown in the inset in FIG. 1, moisture repellant **108** may comprise various layers that are bonded to fitted portion **102**, such as sound absorbent **108-1** and/or waterproofing **108-2**. It is noted that an order and/or thickness of the layers comprising moisture repellant **108** may be varied as desired. For example, in certain embodiments, moisture repellant **108** may reside at least partially on top of fitted portion **102**. It is further noted that at least a portion of moisture repellant **108** may be formed on top of top surface **112** of fitted portion **102**, in certain embodiments. Also, while moisture repellant **108** is shown in the drawings covering a portion of top surface **112** of fitted portion **102**, in other embodiments (not shown), moisture repellant **108** may extend to cover substantially all of top surface **112**.

[0018] Also depicted in FIG. 1 is bond **106** that joins top portion **104** with fitted portion **102**. In various embodiments, bond **106** may be formed using an adhesive, such as a liquid or a tape. In particular embodiments, bond **106** is formed as a seam along an end of top surface **112** of top portion **104**. The seam forming bond **106** may be sewn for a desired strength and/or appearance. In certain embodiments, bond **106** may be a removable bond, such that top portion **104** may be removed from fitted portion **102**. Bond **106** may also be reattachable, such as a bond formed using a zipper and/or a hook-and-loop type fastening tape or strip. Although shown in FIG. 1

extending linearly across an entire end of top surface 112 of fitted portion 102 corresponding to an end of a cushion on which fitted portion 102 is mounted, in different embodiments (not shown) bond 106 may be formed using a number of individual bonding elements, such as dots, lines, etc., each of which may not extend across the entire end of top surface 112, and which may not be co-linear with each other. In given embodiments, bond 106 may comprise combinations of various types of bonds.

[0019] In FIG. 1, top portion 104 is shown with a length corresponding to about a length of top surface 112, but having a width somewhat longer than top surface 112, such that top portion 104 may cover side faces 114 of fitted portion 102. A size of top portion 104 with respect to a size of fitted portion 102 may be selected as desired, in particular embodiments.

[0020] Referring to FIG. 2, a perspective view of selected elements of unitary covering 200 is illustrated. It is noted that like numbered elements in FIG. 2 represent components discussed above with respect to FIG. 1. In particular, unitary covering 200 may represent an embodiment of unitary covering 100 shown in FIG. 1. In FIG. 2, unitary covering 200 is shown covering a mattress and comprising fitted portion 102, top portion 104, bond 106, and moisture repellant 108 (obscured from view).

[0021] Turning now to FIG. 3, a block diagram of selected elements of an embodiment of method 300 for manufacturing a unitary bed covering is depicted in flow-chart form. Method 300 may represent a method for assembling unitary covering 100, in various embodiments. It is noted that certain operations described in method 300 may be optional or may be rearranged in different embodiments.

[0022] Method 300 may begin by providing (operation 302) a fitted portion of the unitary cushion covering for covering a cushion, including a moisture repellant layer. Then, a top portion of the unitary cushion covering may be provided (operation 304). The top portion may be bonded (operation 306) with the fitted portion, including sewing a seam across one end of the fitted portion.

[0023] The above disclosed subject matter is to be considered illustrative, and not restrictive, and the appended claims are intended to cover all such modifications, enhancements, and other embodiments which fall within the true spirit and scope of the present disclosure. Thus, to the

maximum extent allowed by law, the scope of the present disclosure is to be determined by the broadest permissible interpretation of the following claims and their equivalents, and shall not be restricted or limited by the foregoing detailed description.

**WHAT IS CLAIMED IS:**

1. A unitary bed covering for a mattress, comprising:  
a fitted portion for covering the mattress, including a moisture resistant layer; and  
a top portion bonded to the fitted portion at one end of the fitted portion.
2. The unitary bed covering of claim 1, wherein the fitted portion is configured to cover a top surface of the mattress and four side surfaces of the mattress, and wherein the moisture resistant layer extends over the top surface of the mattress when the unitary bed covering is installed on the mattress.
3. The unitary bed covering of claim 1, wherein the fitted portion is configured to extend to at least partially cover a bottom surface of the mattress, and wherein the fitted portion is held in place on the mattress by elastic elements at edges of the fitted portion when the unitary covering is installed on the mattress.
4. The unitary bed covering of claim 1, wherein the moisture resistant layer includes:  
a waterproof layer; and  
a sound absorbent layer.
5. The unitary bed covering of claim 1, wherein the moisture resistant layer includes a padding material.
6. The unitary bed covering of claim 1, wherein the fitted portion includes a fabric layer to which the moisture resistant layer is bonded.
7. The unitary bed covering of claim 1, wherein the top portion is bonded to the fitted portion using a linear seam at the one end of the fitted portion.

8. The unitary bed covering of claim 7, wherein the linear seam extends from one side of the fitted portion to another side of the fitted portion.

9. A unitary cushion covering, comprising:  
a fitted sheet for covering a cushion, including a moisture repellant layer; and  
a top sheet bonded to the fitted sheet at one end of the fitted sheet.
10. The unitary cushion covering of claim 9, wherein the moisture repellant layer includes:  
a waterproof layer; and  
a sound absorbent layer.
11. The unitary cushion covering of claim 9, wherein the cushion is a mattress.
12. The unitary cushion covering of claim 9, wherein the top sheet is bonded to the fitted sheet using a linear seam at the one end of the fitted sheet.
13. The unitary cushion covering of claim 12, wherein the linear seam extends fully along the one end of the fitted sheet.
14. The unitary cushion covering of claim 12, wherein the linear seam extends partially along the one end of the fitted sheet.

15. A method of manufacturing a unitary cushion covering, comprising:  
bonding a fitted portion of the unitary cushion covering with a moisture repellant layer;  
and  
bonding a top portion of the unitary cushion covering to the fitted portion at one end of the fitted portion.
16. The method of claim 15, wherein the moisture repellant layer includes:  
a waterproof layer; and  
a sound absorbent layer.
17. The method of claim 15, wherein the fitted portion covers a top surface of the cushion and four side surfaces of the cushion, and wherein the moisture resistant layer extends over the top surface of the cushion when the unitary cushion covering is installed on the cushion.
18. The method of claim 15, wherein the cushion is substantially rectangular in shape.
19. The method of claim 15, wherein the top portion and the fitted portion are made of fabric, and wherein the bonding further comprises:  
sewing a seam at the one end of the fitted portion.
20. The method of claim 19, wherein the seam bonds an edge of the top portion to the fitted portion.

100 ↗

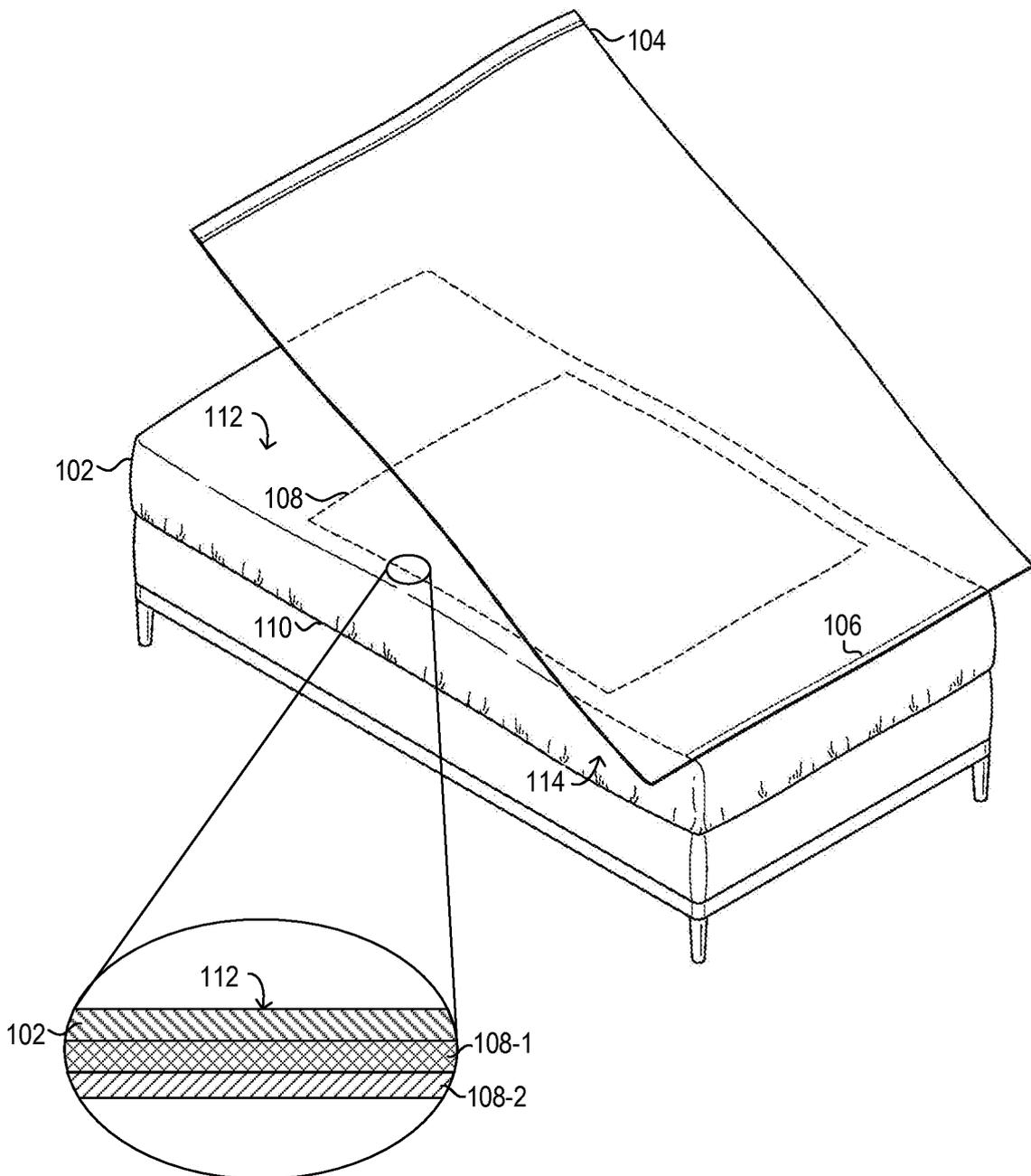


FIG. 1

200 ↘

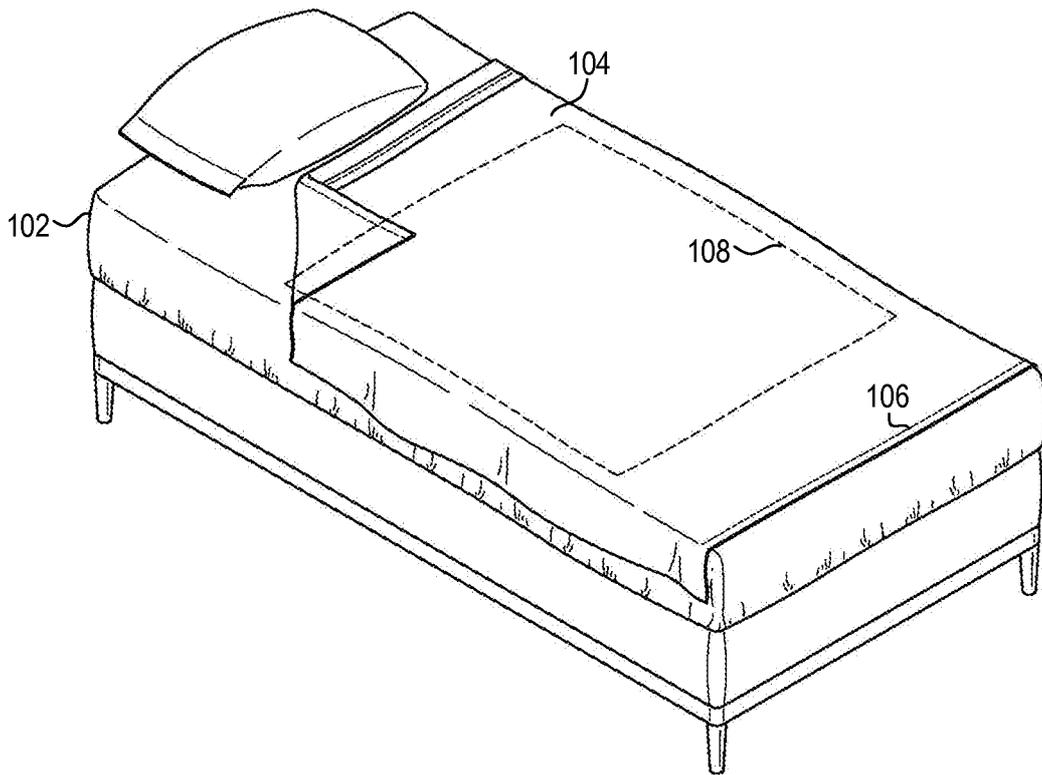


FIG. 2

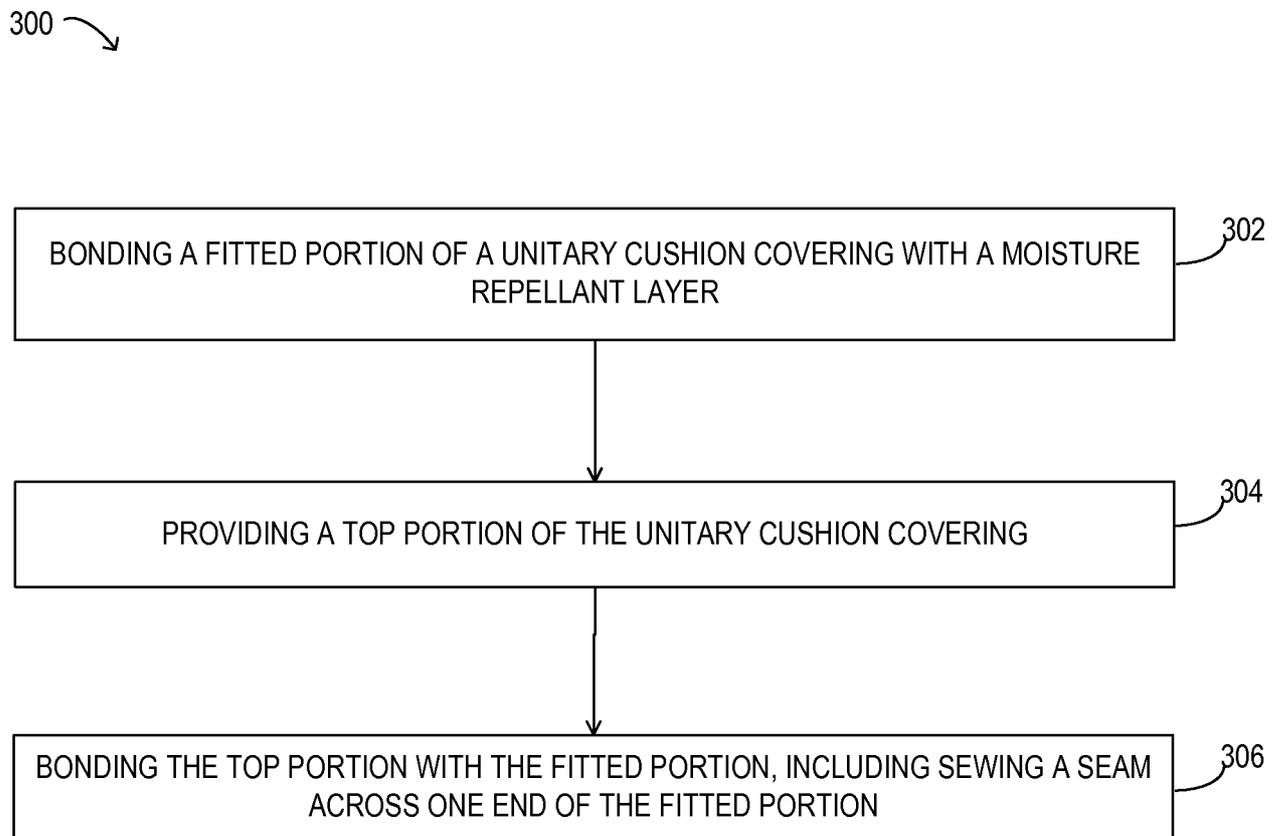


FIG. 3

**A. CLASSIFICATION OF SUBJECT MATTER****A47C 31/00(2006.01)i, A47G 9/00(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

A47C 31/00; A61G 12/00; A47C 27/14; A47G 9/02; A47C 23/30; A47C 21/08; A47C 23/00; A61F 5/48; G08B 23/00; A47G 9/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) &amp; Keywords: bed, covering, fitted portion, top portion, moisture repellent, bond

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category* :	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2011-0094039 A1 (TERVO et al.) 28 April 2011 See paragraphs [0013], [0015]- [0016], claim 1, and figures 2,3.	1-20
A	US 5530974 A (RAINS et al.) 02 July 1996 See column 5 lines 7-39 and figure 1.	1-20
A	US 2010-0154119 A1 (SHUTTLEWORTH, KYM) 24 June 2010 See paragraphs [0023], [0024] and figure 1.	1-20
A	US 5144284 A (HAMMETT, RAWLINGS H.) 01 September 1992 See column 4 line 58-column 3 line 29, claim 1, and figures 1,2.	1-20
A	US 3859678 A (DAVIS, RACHEL D.) 14 January 1975 See column 2 line 28-column 3 line 3 and figure 1.	1-20

 Further documents are listed in the continuation of Box C.

 See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

08 November 2013 (08.11.2013)

Date of mailing of the international search report

**11 November 2013 (11.11.2013)**

Name and mailing address of the ISA/KR


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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2013/030330**

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
us 2011-0094039 AI	28/04/2011	None	
us 5530974 A	02/07/1996	US 5359739 A US 5530974 A	01/11/1994 02/07/1996
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