

(19)



(11)

EP 2 957 192 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
23.12.2015 Bulletin 2015/52

(51) Int Cl.:
A47C 31/10 ^(2006.01)

(21) Application number: 15173038.9

(22) Date of filing: 21.06.2015

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**
Designated Extension States:
BA ME
Designated Validation States:
MA

(30) Priority: 20.06.2014 EE 201400025

(71) Applicant: **Osaühing Delux
71020 Viljandi linn (EE)**

(72) Inventor: **Sjöholm, Göran Valdemar
74217 Manniva küla (EE)**

(74) Representative: **Nelsas, Tónu
AAA Patendibüroo OÜ
Tartu mnt, 16
10117 Tallinn (EE)**

(54) BED MATTRESS SET

(57) The invention is a bed mattress set, which comprises of a mattress cover (2) attached to bed mattress (1) and a mattress topper (7) attached to mattress cover (2) or inside mattress cover. Mattress cover (2) with mattress topper (7) inside is permanently fixed to bed mattress (1), which prevents shifting of the mattress topper

(7) during sleep. Top mattress cover (2) has zippers, which enable removing topper for washing and changing. As mattress cover (2) is attached to bed mattress (1) from centre part, mattress cover edges are left open and therefore it is possible to fold bed linen under mattress cover.

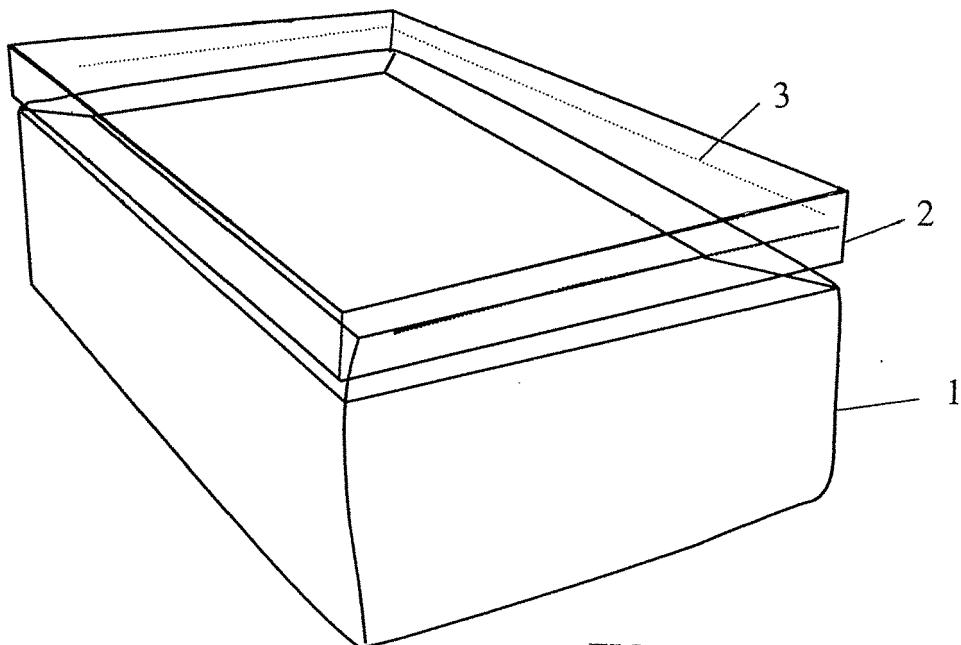


FIG 1

Description

Field of the invention

[0001] This invention relates to the field of bedding articles, more particularly to the field of bed mattresses. The invention is a set of bed mattresses that includes a mattress topper with a mattress case with zippers that is permanently fastened to the bed mattress.

Background of the invention

[0002] The prior art includes mattress toppers and fastening thereof to a bed mattress using elastic bands to protect it. However, this type of fastening does not ensure a fully fixed position of the mattress topper; hence, the mattress topper needs to be constantly repositioned. Moreover, the elastic bands wear out quickly and it is troublesome to fold a sheet under the mattress topper through the elastic bands.

[0003] The European patent application No. EP2377433 discloses a fastening system of mattress toppers with straps with clips onto the bed mattress. This type of fastening does ensure a permanent fixed position of the mattress topper, but it can wear out over time, and it is likewise very complicated to cover the mattress topper with a sheet through the straps.

[0004] The US patent application No. US20080005845 discloses a mattress case for fixing a mattress topper onto a bed mattress, wherein one side of the mattress case is fastened with a zipper. However, the mattress case does not allow fastening a sheet under the mattress topper, and thus the sheet must be large enough to be fastened under the mattress topper that is generally quite thick. Also, it is troublesome to fold a sheet under a thicker bed mattress. The sheet starts to shift while being slept on.

[0005] The US patent application No US7007329 discloses a pillow-mattress cover that is fastened to the main mattress at the edges by means of zippers. However, fastening at the edges does not allow placing the edges of a sheet under the mattress topper and in such a case, the sheet must be large enough to fold the edges under the bed mattress that is troublesome to do in the case of a thicker mattress. The mattress topper must be covered with a sheet, so that the edges of the sheet can be placed under the mattress topper, ensuring a fixed position of the sheet and preventing the mattress topper from getting dirty.

[0006] Also, the fastening of mattress toppers to a bed mattress is known by the means of a Velcro fastening in the middle portion of mattresses, but this fastening is not sufficient for fixing a mattress topper, it wears out over time and can damage materials.

Summary of the invention

[0007] The object of the invention is to provide a mat-

tress topper, fixed onto a bed mattress, that does not shift while being slept on and that can be readily covered with a sheet, by folding the edges of the sheet under the mattress topper. The object is achieved by a set of bed mattresses that includes a bed mattress and a mattress topper with a mattress case that have been fixed together so that the mattress topper does not shift. The mattress topper is in the mattress case, whereas the mattress case has been fastened in the middle portion to the bed mattress. The mattress case has zippers that enable removing the mattress topper from the mattress case, for example, for changing or washing. The mattress topper may be also functional without the mattress case. In this case, the middle portion of the upper side of the bed mattress and the middle portion of the lower side of the mattress topper are fastened to each other by a zipper.

List of illustrations

[0008] The preferred embodiments of the invention are described by reference to the appended figures, wherein the figures depict the following:

FIG 1: a general view of the bed mattress and the mattress case equipped with a zipper

FIG 2: an end view of the bed mattress and mattress case

FIG 3: a general view of the bed mattress with a rectangular area, where the lower side of the mattress bed is fastened in the preferred embodiment.

FIG 4: a general view of the mattress case in an open position, where one side of the zipper is fastened to the middle portion of the lower side.

A representative embodiment of the invention

[0009] In a preferred embodiment, the invention includes (see FIG 1) a bed mattress 1 and on it a mattress topper in a mattress case (not shown). There is a zipper 3 or similar fastening device (shown as a dotted line in the figure) on a side of the mattress case, so that the mattress topper can be readily removed from the mattress case, if desired. In a preferred embodiment of the invention, the thickness of the mattress topper decreases slightly towards the edges of the mattress, so that there is a small gap 4 between the bed mattress and mattress topper near the edges of the bed mattress (see FIG 2). This gap is suited for placing the edges of a sheet (not shown in the figures) under the edges of the mattress case. The bed mattress is a rectangular mattress with a mattress case 2 fastened to the middle portion of the upper surface along line 5. The mattress case is a rectangular case/bag of the size of the bed mattress with fastenings and openings that includes a mattress topper corresponding to the inside dimensions of the mattress

case or that can encase a separate mattress topper. The mattress case and the bed mattress are fastened to each other in the middle portion of the upper side of the bed mattress along line 5 (see FIG 3).

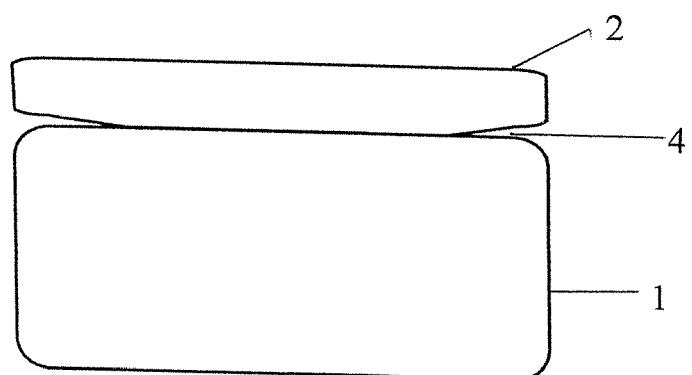
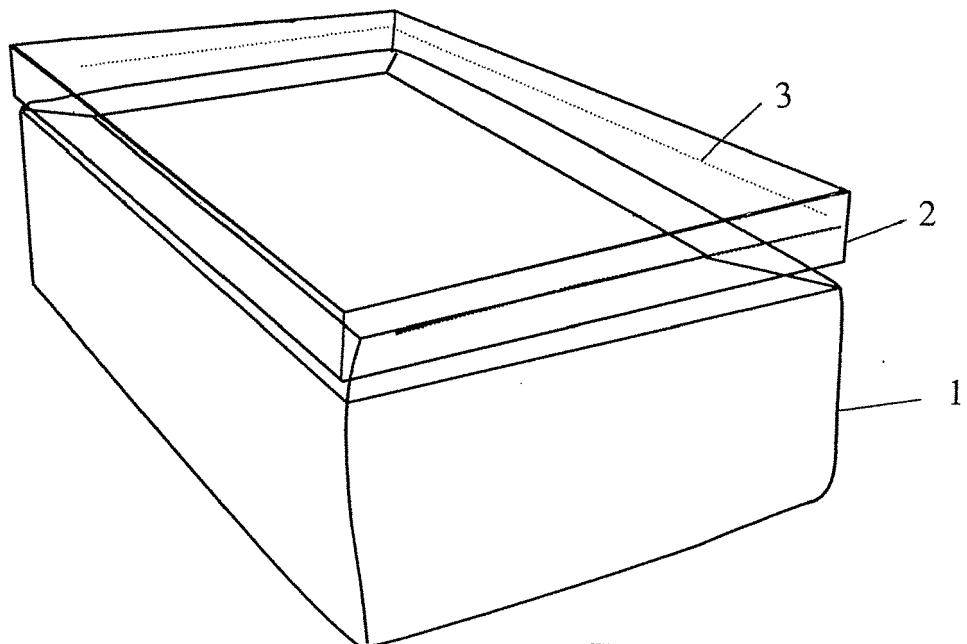
[0010] According to a preferred embodiment of the invention, the fastening connecting the bed mattress and the mattress case is a rectangular seam. In alternative embodiments of the invention, the connecting seam may have a different shape. According to still another embodiment of the invention, the bed mattress and mattress case are fixed with a fastening with a zipper sewn along the same line 5.

[0011] At an edge or edges of the mattress case, there is a closable opening or openings that, according to a preferred embodiment of the invention, can be fastened with a zipper. Through the openings, the mattress topper is removed from the mattress case for washing or changing, and is reinserted into the mattress case. A zipper 6 is sewn on the inner side of the lower half of the mattress case at a certain distance from the edges of the mattress case. The zipper 6 may be sewn also at the edges of the mattress case. The other side of the zipper is sewn on the lower side of the mattress topper (see FIG 5) along line 8 corresponding to line 6. In a preferred embodiment, the zipper is sewn along the edges of a rectangular area, but alternatively, the zipper may be sewn along the contours of an area with a different shape. Thanks to the fastening thus fixed, the mattress case and the fastened mattress topper in it do not shift while being slept on. Since the attachment lines 5 and 6 of the bed mattress and mattress topper are positioned farther away from the edges of the mattress case towards the middle portion, the area of the edges of the mattress case and bed mattress remains open, i.e. the edges of a sheet can be folded under the mattress case. The invention can be applied also in the case, where the mattress topper does not have a mattress case. In this case, the middle portion of the upper side of the bed mattress and the middle portion of the lower side of the mattress topper are connected to each other with a zipper.

- 4. A set of bed mattresses according to claim 1, **characterized in that** the mattress case and bed mattress are fastened to each other by a substantially rectangular sewn zipper.
- 5. A set of bed mattresses according to claim 1, **characterized in that** the lower half of the mattress topper in the mattress case is connected to the mattress case by a zipper sewn along a substantially rectangular line.
- 10. A set of bed mattresses according to claim 1, **characterized in that** there is one or more zippers at the edges of the mattress case.
- 15. A set of bed mattresses according to claim 1, **characterized in that** the middle portion of the lower half of the mattress topper is connected to the middle portion of the upper half of the bed mattress by a zipper sewn along a substantially rectangular line.
- 20. A set of bed mattresses according to claim 1, **characterized in that** the middle portion of the lower half of the mattress topper is connected to the middle portion of the upper half of the bed mattress by a zipper sewn along a substantially rectangular line.
- 25. A set of bed mattresses according to claim 1, **characterized in that** the middle portion of the lower half of the mattress topper is connected to the middle portion of the upper half of the bed mattress by a zipper sewn along a substantially rectangular line.
- 30. A set of bed mattresses according to claim 1, **characterized in that** the middle portion of the lower half of the mattress topper is connected to the middle portion of the upper half of the bed mattress by a zipper sewn along a substantially rectangular line.
- 35. A set of bed mattresses according to claim 1, **characterized in that** the middle portion of the lower half of the mattress topper is connected to the middle portion of the upper half of the bed mattress by a zipper sewn along a substantially rectangular line.
- 40. A set of bed mattresses according to claim 1, **characterized in that** the middle portion of the lower half of the mattress topper is connected to the middle portion of the upper half of the bed mattress by a zipper sewn along a substantially rectangular line.

Claims

- 1. A set of bed mattresses that includes a bed mattress (1) and a mattress topper (7) in a mattress case (2), **characterized in that** the middle portion of the lower side of the mattress case is fastened to the middle portion of the upper surface of the bed mattress.
- 45. A set of bed mattresses according to claim 1, **characterized in that** the fastening between the mattress case and bed mattress is a seam.
- 2. A set of bed mattresses according to claim 1, **characterized in that** the fastening between the mattress case and bed mattress is a seam.
- 50. A set of bed mattresses according to claim 1, **characterized in that** the mattress case and bed mattress are fastened to each other by a substantially rectangular seam.
- 3. A set of bed mattresses according to claim 1, **characterized in that** the mattress case and bed mattress are fastened to each other by a substantially rectangular seam.
- 55. A set of bed mattresses according to claim 1, **characterized in that** the mattress case and bed mattress are fastened to each other by a substantially rectangular seam.



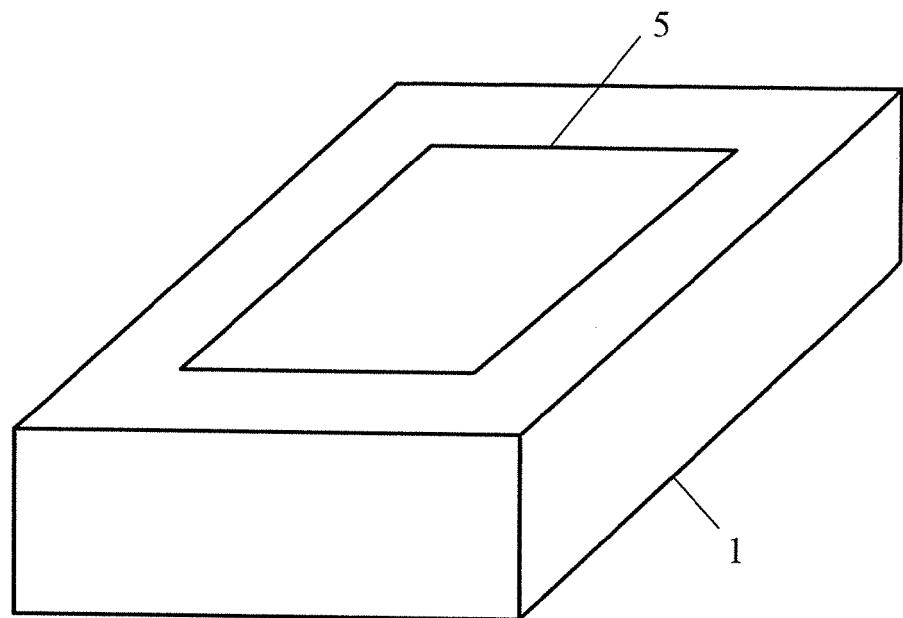


FIG 3

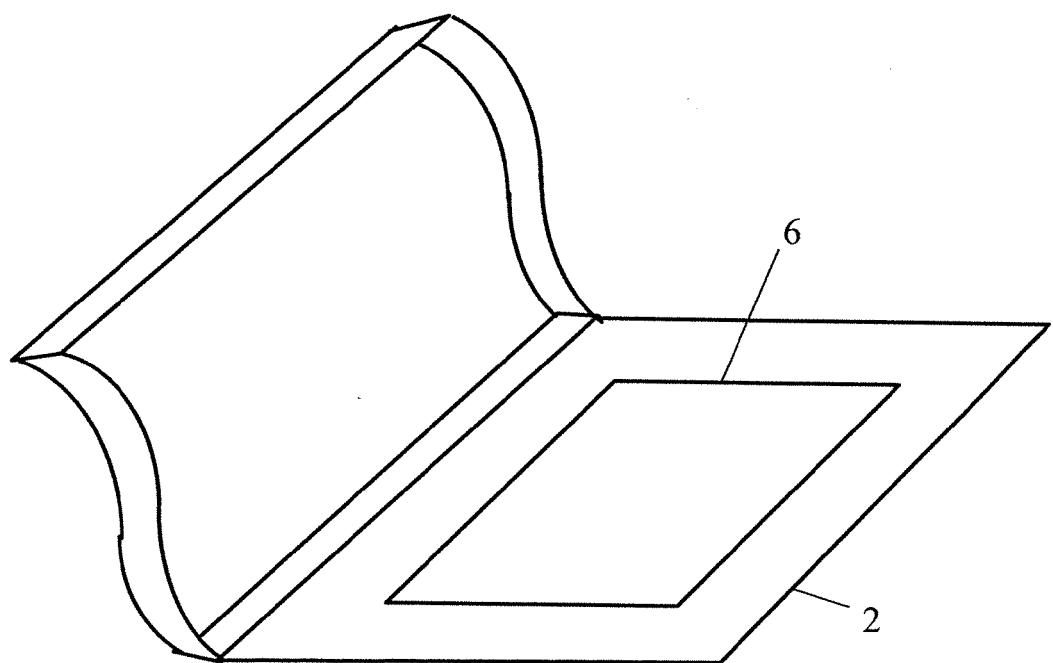


FIG 4

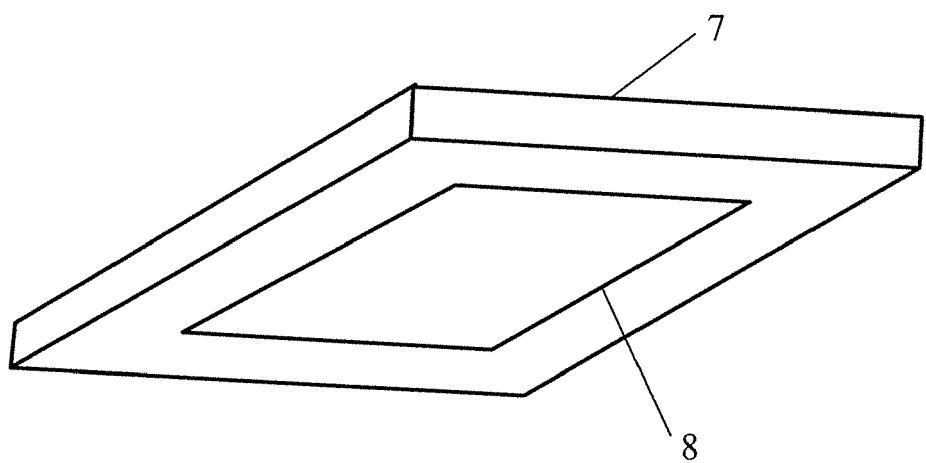


FIG 5



EUROPEAN SEARCH REPORT

Application Number
EP 15 17 3038

5

10

15

20

25

30

35

40

45

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	US 2011/247143 A1 (RICHARDS ET AL) 13 October 2011 (2011-10-13) * paragraph [0022]; figures *	1-4,6,7	INV. A47C31/10
X	WO 2010/075229 A1 (TEMPUR PEDIC MAN INC) 1 July 2010 (2010-07-01) * paragraph [0021]; figure 2 *	1	
X	WO 2011/072022 A1 (OTIS BED MFG COMPANY INC) 16 June 2011 (2011-06-16) * figures 1,6 *	1,5	
A	US 2004/019972 A1 (SCHECTER ET AL) 5 February 2004 (2004-02-05) * paragraph [0005]; figures *	6	
A	DE 298 09 859 U1 (HUESER SCHLARAFFIA WERKE) 20 August 1998 (1998-08-20) * claim 8; figure 1 *	7	
A	US 2007/283497 A1 (MCCAIN) 13 December 2007 (2007-12-13) * paragraph [0022]; figures 4,5 *	1-7	TECHNICAL FIELDS SEARCHED (IPC)
			A47C
The present search report has been drawn up for all claims			
1	Place of search	Date of completion of the search	Examiner
50	The Hague	16 October 2015	Kis, Pál
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 15 17 3038

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

16-10-2015

10

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2011247143 A1	13-10-2011	US 2011247143 A1	13-10-2011
		US 2015089749 A1	02-04-2015
WO 2010075229 A1	01-07-2010	CA 2747967 A1	01-07-2010
		CN 102292209 A	21-12-2011
		EP 2373483 A1	12-10-2011
		JP 2012513247 A	14-06-2012
		US 2011256380 A1	20-10-2011
		WO 2010075229 A1	01-07-2010
WO 2011072022 A1	16-06-2011	NONE	
US 2004019972 A1	05-02-2004	NONE	
DE 29809859 U1	20-08-1998	NONE	
US 2007283497 A1	13-12-2007	NONE	

15

20

25

30

35

40

45

50

55

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- EP 2377433 A [0003]
- US 20080005845 A [0004]
- US 7007329 B [0005]