

(19)



(11)

EP 2 567 638 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

13.03.2013 Bulletin 2013/11

(51) Int Cl.:

A47C 31/00 (2006.01)

(21) Application number: **12154915.8**

(22) Date of filing: **10.02.2012**

(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

(30) Priority: **12.09.2011 SE 1150822**

(71) Applicant: **Odios Vandrarhem AB**
754 21 Uppsala (SE)

(72) Inventor: **Diös, Oscar**
756 53 UPPSALA (SE)

(74) Representative: **Örtenblad, Bertil Tore et al**
Noréns Patentbyrå AB
P.O. Box 10198
100 55 Stockholm (SE)

(54) **Bed or piece of furniture**

(57) A bed or piece of furniture with a spring bottom, in other words a bottom comprising resilient coil springs, arranged to counteract the occurrence of vermin in the bed or piece of furniture, where the bed or piece of furniture has a lower frame (1), supporting said spring bottom, which bed or piece of furniture is covered on its upper surface and side surfaces with a textile material which is so densely woven so that a vermin is unable to

penetrate the textile material.

The invention is characterised in that a woven textile fabric (3), which is permeable to air but so densely woven so that a vermin cannot penetrate the textile material, is fastened to said frame (1), in that the fabric (3) covers the whole bottom of the frame, without there being any openings between the frame and the textile material through which vermin would be able to crawl into the spring bottom.

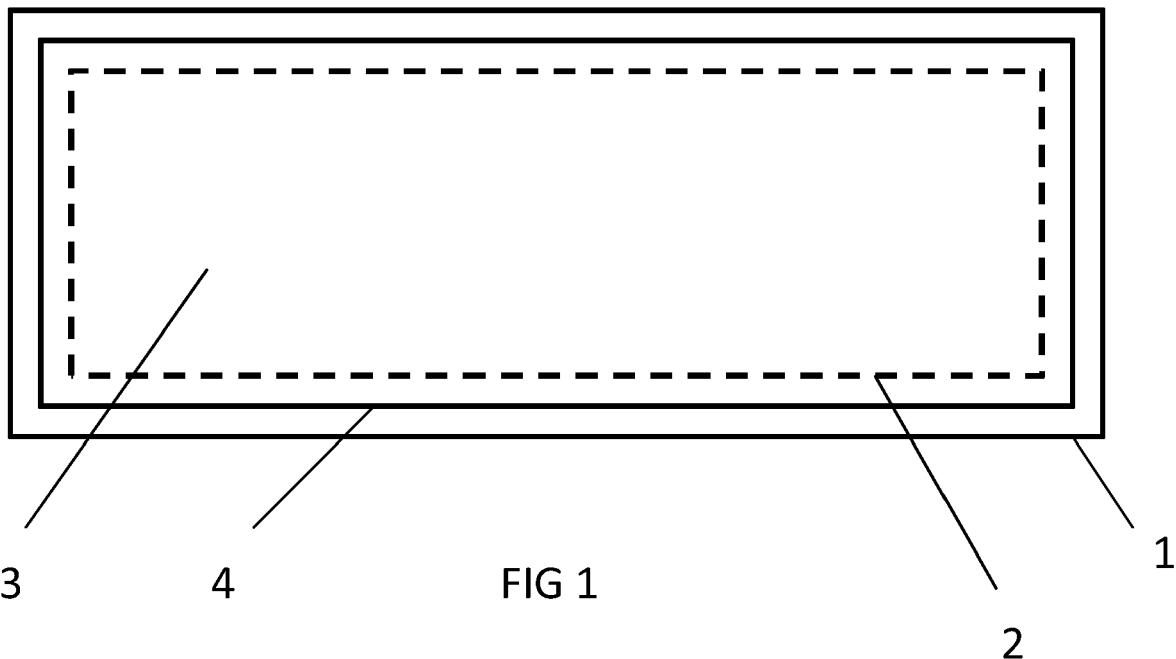


FIG 1

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Description

[0001] The present invention relates to a bed or piece of furniture with a spring bottom or springbase, in other words a bottom comprising resilient coil springs, arranged to counteract occurrence of vermin in the bed or piece of furniture.

[0002] Vermin, such as bedbugs, cockroaches, etc., have a tendency of preferring being close to humans and where it is dark. Therefore, it has turned out that such vermin, and especially bedbugs, hide in beds and in other furniture used by humans.

[0003] It has turned out that, inter alia, hotel beds become unusable because of bedbug invasion of the bed bottom. Since a spring bottom, among other things, consists of a large number of springs, it is very difficult if not impossible to decontaminate since one does not have access to all spaces. Bedbugs and their eggs are also difficult to discover, since they are small. The same is true regarding furniture with spring bottoms, such as armchairs and sofas.

[0004] Of course, hotel beds are attacked since many different persons from different parts of the world sleep in the beds, and bring vermin with them in different ways. When for example bed bugs are present in a hotel bed, this must be removed and the room decontaminated, and a new bed must be procured. Apart from costs for the bed and the decontamination, this also results in a lack of revenue since the hotel room will be unoccupied for a number of days.

[0005] Thus, there is a strong need for a way to avoid that vermin occur in hotel beds and hotel furniture having spring bottoms.

[0006] The present invention fills this need.

[0007] Hence, the present invention relates to a bed or piece of furniture with a spring bottom, in other words a bottom comprising resilient coil springs, arranged to counteract the occurrence of vermin in the bed or piece of furniture, where the bed or piece of furniture has a lower frame, supporting said spring bottom, which bed or piece of furniture is covered on its upper surface and side surfaces with a textile material which is so densely woven so that a vermin is unable to penetrate the textile material, and is **characterized in that** a woven textile fabric, which is permeable to air but so densely woven so that a vermin cannot penetrate the textile material, is fastened to said frame and so that it covers the whole bottom of the frame, without there being any openings between the frame and the textile material through which vermin would be able to crawl into the spring bottom.

[0008] Below, the invention is described in closer detail, partly in connection to an embodiment shown on the enclosed drawing of the invention, in which figure 1 illustrates a bed, an armchair or a sofa as seen from below.

[0009] The present invention relates to a bed or piece of furniture having a spring bottom, in other words a bottom comprising resilient coil springs. Such a spring bottom is known as such. The invention is arranged to coun-

teract the occurrence of vermin in the bed or piece of furniture.

[0010] The bed or piece of furniture has a lower frame 1, which supports the said spring bottom. Normally, the frame is made of wood. In figure 1, the broken lines 2 denote the inner side of the frame 1. Often, parallel wooden ribs are placed across the longitudinal direction of the bed and against the upper side of the frame 1 in order to support the coil springs. The bed or the piece of furniture is covered on its upper and side surfaces, not shown, with a textile material, which conventionally is so densely woven so that vermin are unable to penetrate the textile material.

[0011] According to the invention, a woven textile fabric 3, which is permeable to air but so densely woven so that a vermin cannot penetrate the textile material fastened to the said frame 1, which fabric covers the whole bottom of the frame, there being no openings between the frame 1 and the textile material 3 through which vermin would be able to crawl into the spring bottom. Preferably, the fabric is fastened to the frame by the use of staples or nails.

[0012] That the fabric 3 is permeable to air means that the bed or piece of furniture can breathe in the usual way, so that moisture can escape from the bed or piece of furniture.

[0013] A fabric which may be used is a fabric made available by Georg & Otto Friedrich KG in Germany under the name 7058FL.

[0014] As a result of this arrangement, vermin, such as bedbugs, are unable to enter into the bed. Any vermin on top of the bed can be removed using a vacuum cleaner or the like. Hereby, the initially mentioned problem, of a bed becoming unusable as a result of vermin residing in the bed, is avoided.

[0015] According to a preferred embodiment, there is a glue, i.e. a strand of glue, between the said fabric 3 and the frame 1. Preferably, the glue is of the type silicone glue. The glue strand makes it easier to make sure that there are no openings between for instance the said staples.

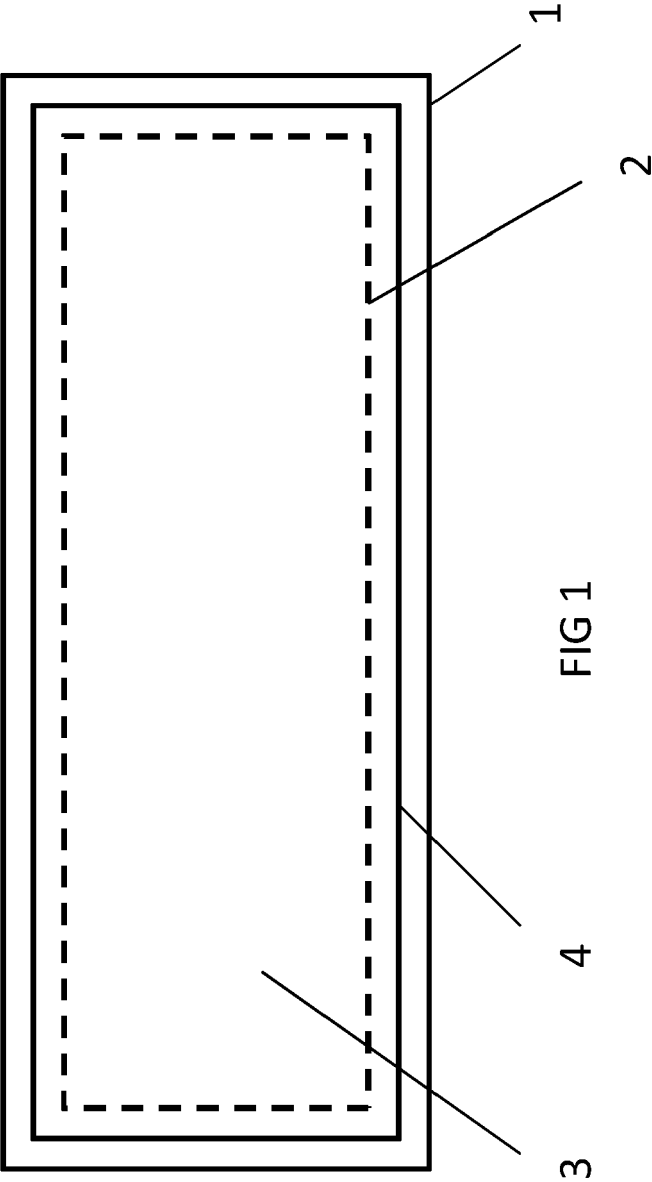
[0016] According to another preferred embodiment, the fabric 3 is fastened to the underside of the frame 1 along the frame.

[0017] Above, a number of embodiments have been described. However, it is obvious that the way in which the said fabric is fastened to the frame can be varied, as well as the fastening of the fabric to the frame. It is also apparent that the skilled person can adjust the weaving density of the fabric to the current vermin. Even if it is not preferred, the fabric can also be a textile material made from synthetic material, which is permeable to air via small pores, such as the materials made available under the trade name Gore-Tex.

[0018] Therefore, the present invention shall not be limited to the above described embodiments, but may be varied within the scope of the enclosed claims.

Claims

1. A bed or piece of furniture with a spring bottom, in other words a bottom comprising resilient coil springs, arranged to counteract the occurrence of vermin in the bed or piece of furniture, where the bed or piece of furniture has a lower frame (1), supporting said spring bottom, which bed or piece of furniture is covered on its upper surface and side surfaces with a textile material which is so densely woven so that a vermin is unable to penetrate the textile material, **characterized in that** a woven textile fabric (3), which is permeable to air but so densely woven so that a vermin cannot penetrate the textile material, is fastened to said frame (1), **in that** the fabric (3) covers the whole bottom of the frame, without there being any openings between the frame and the textile material through which vermin would be able to crawl into the spring bottom.
2. A bed or piece of furniture according to claim 1, **characterized in that** there is a glue of the type silicone glue between the said fabric (3) and the frame (1).
3. A bed or piece of furniture according to claim 1 or 2, **characterized in that** the fabric (3) is fastened to the underside of the frame (1) along the frame.





EUROPEAN SEARCH REPORT

Application Number
EP 12 15 4915

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 397 234 A (C.B. HOWELL) 5 February 1889 (1889-02-05) * page 1, line 8 - line 38; figures 1-2 *	1-3	INV. A47C31/00
X	US 1 579 104 A (GRANOVSKY ALBERT A) 30 March 1926 (1926-03-30) * page 1, line 51 - page 2, line 48; figures 1-8 *	1-3	
A	US 6 277 770 B1 (SMITH III JOHN MARTIN [US] ET AL) 21 August 2001 (2001-08-21) * column 3, line 66 - column 4, line 33 * * column 4, line 47 - line 55 *	1	
A	US 5 966 759 A (SANDERS KURT [DE] ET AL) 19 October 1999 (1999-10-19) * column 3, line 60 - column 4, line 3; figures 1-4 *	1	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			A47C
Place of search		Date of completion of the search	Examiner
The Hague		3 December 2012	Kus, Slawomir
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			

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EPO FORM 1503 03/82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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