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— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

Published:

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(54) Title: IMPROVED SPRING BED SYSTEM WITH SUPPLEMENTARY AIR VOID

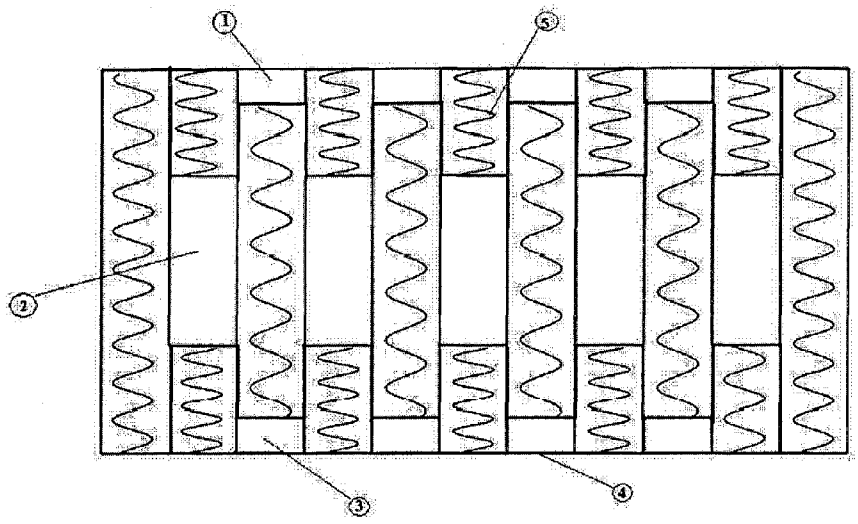


FIGURE 1

(57) Abstract: The invention relates to an improved spring bed system with supplementary air void wherein it comprises of a first air void (1), a second air void (2), a third air void (3), an interlining covering (4) and springs (5).

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DESCRIPTION

IMPROVED SPRING BED SYSTEM WITH SUPPLEMENTARY AIR VOID

Technological Field:

The invention relates to an improved spring bed system with supplementary air void having an elasticity to take the form of the physical structure of human body in order to be used in bed constructions, armchair and couch constructions.

State of the Art:

Sleeping has been the vital activity that was most needed by mankind throughout the history. A continuous sleep is the most effective way of starting the next day in a fresh and ready way as well as being a good way of eliminating the daily tiredness experienced prior to it. It has been statistically and scientifically proven that the people involved in the business life in particular display an inadequate performance that is below the average following an inefficient sleep.

The most important point in sleep is not the number of hours that a person sleeps but the efficiency of the sleep the person gets. To describe it in brief, an efficient sleep is;

- Should be continuous,
- Should not induce the feeling of the need of turning to right or left with frequent intervals.
- Should be experienced with a brain free of all thoughts and with a calm mood.

Importance of efficient sleep in human life can be understood from that patients are required by their physicians to spend most of the day by sleeping or babies grow better physically during more sleep.

Beds, pillows, armchairs and couches are put onto market by related companies for the aim of providing efficient sleep. Is is also observed that these products on the market sometimes do not meet expectations of consumers. It is known that expectation of the consumer is oriented towards manufacturing of orthopaedic beds and pillows which are more suitable for body structure. Many products in this regard have been offered to customers as well.

The air voids in the system created for this purpose in the patent numbered US 2010/0139006 are formed by joining the upper surface of the lower small pocket with the lower surface of the upper small pocket such that they do not contact with each other. When the construction in the said patent with application number US 2010/0139006 is considered it is seen that the air voids providing elasticity of the bed are gathered at the middle part of the bed.

Parts referred to as pockets are placed just beneath the top and bottom surfaces rather than the air voids of our invention. By virtue of the action-reaction principle, these parts load back the load action on them to the head, neck, back and waist sections as a reaction causing discomfort. Furthermore, the system of the said patent with application number US 2010/0139006 focuses on only one user rather than aiming to achieve the same feeling by users with different lengths and weights as is the case for the invention of improved spring bed system with supplementary air void.

Object of the Invention:

The invention aims to prevent turning to right or left by allowing the bed to attain a form and to get adjusted according to anatomical structure of the body by means of the supplementary air voids and springs (5) contained in the bed when pressure acts on them thus providing to realise an efficient sleep. Furthermore, another aim of the invention is to achieve the same feeling and comfort by users with different lengths and weights in double beds.

Description of the Invention:

In normal constructions, springs load back the major part of the applied pressure in reaction when load acts upon them and this triggers turning to right or left since this condition influences blood circulation during sleep, thus preventing the brain to relax entirely during the sleep. Yet another important difference is that the bed easily attains the anatomic form of the body and does not apply any pressure on the body when doing so which is the most important feature of the bed desired by the user. In this said construction, the first air void (1) and the second air void (2) are created in order to provide this condition when lied down on the bed. And the third important factor is that it is possible for two different persons with different body weights to have the same feeling and comfort in a double bed. While the second air void (2) provides comfort and spring-back for persons with higher body weight, the first air void (1) serves for the same thing for persons with a lower body weight.

The most important difference of the invention from its equivalents as that spring-back and oscillation continues after pressure is applied on the unit, namely after getting lied on the bed, since the springs (5) do not get entirely closed during secondary pressures like turning to right or left. This difference is provided by the third air void (3) and this is the necessary feature in terms of health.

The first air void (1) contained in the invention allows attaining the anatomic structure of bodies with lower body weight almost without applying any pressure on the body.

The second air void (2) allows attaining the anatomic structure of bodies with higher body weight similarly without applying any pressure and causes the secondary pressures applied by bodies with lower body weight (like turning to right or left) to be softer by means of the spring-back effect. And the third air void (3) provides spring-back effect during the secondary pressure of the body with higher body weight supporting a healthy sleep pattern.

The voids supplemented just beneath the interlining covering (4) allow the unit to attain the body form with a lower pressure. The second air void (2) becomes involved during secondary pressures which will arrive after this pressure. However, in the patent with application number US 2010/0139006, a hard effect is received during secondary pressures due to contact of springs to each other and this process has resulted in a sleep which is not very efficient.

Explanation of Figures:

This invention is described in further detail only by means of example by referring to following drawing in the annex where;

Figure 1 Is side sectional view of the improved spring bed system with supplementary air void

The figures which will facilitate understanding of this invention are numbered as indicated in the attached figures and are provided below along with their names.

Explanation of References:

1. First air void
2. Second air void
3. Third air void
4. Interlining covering
5. Springs

The invention is improved spring bed system with supplementary air void wherein it comprises of a first air void (1), a second air void (2), a third air void (3), an interlining covering (4) and springs (5).

CLAIMS

1. The invention is improved spring bed system with supplementary air void wherein it comprises of a first air void (1), a second air void (2), a third air void (3), an interlining covering (4) and springs (5).

2. The invention is improved spring bed system with supplementary air void according to Claim 1 wherein the bed comprises a first air void (1) which allows the bed to attain the anatomic body form of persons with lower body weights almost without applying any pressure.

3. The invention relates to improved spring bed system with supplementary air void according to Claim 1 wherein the bed comprises a second air void (2) which allows the bed to attain the anatomic body form of persons with higher body weights almost without applying any pressure.

4. The invention relates to improved spring bed system with supplementary air void according to Claim 1 wherein it comprises a third air void (3) which provides the spring-back effect when secondary pressures of persons with higher body weights are applied like turning to right or left.

5. The invention relates to improved spring bed system with supplementary air void according to Claims 1, 2, 3 or 4 wherein it comprises an interlining covering (4) which holds the first air void (1), the second air void (2), the third air void (3) and the springs (5) together as a whole and which can have various dimensions.

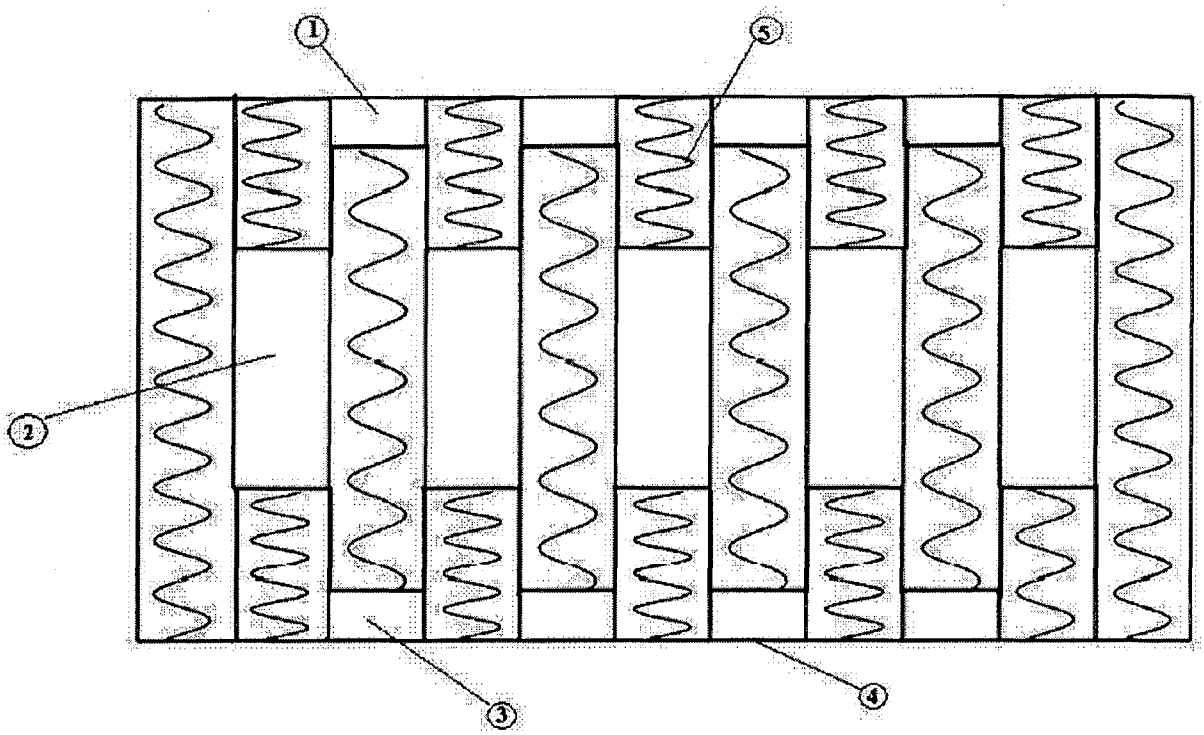


FIGURE 1

INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
INV. A47C23/047 A47C27/06 A47C27/07
ADD.

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

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

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2010/139006 A1 (KILIC ERSEN [TR]) 10 June 2010 (2010-06-10) cited in the application figure 4 abstract	1-5
X	GB 2 452 602 A (HARRISON A [GB]) 11 March 2009 (2009-03-11) figures 1,3 page 2, lines 11-18 page 8, lines 10-20	1-5
X	US 2004/128773 A1 (BARBER JAMES R [US]) 8 July 2004 (2004-07-08) figures 1,2,8,11 paragraphs [0036] - [0038]	1-5

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[X] Further documents are listed in the continuation of Box C.

[X] 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 another 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

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
27 November 2013	04/12/2013

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INTERNATIONAL SEARCH REPORT

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/273939 A1 (MOSSBECK NIELS S [US]) 15 December 2005 (2005-12-15) figures 3,6,7 paragraphs [0038] - [0040], [0055], [0058] -----	1-5

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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		EA 200970351 A1	30-10-2009
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		US 2010139006 A1	10-06-2010
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US 2005273939 A1	15-12-2005	EP 1768520 A1	04-04-2007
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