TRAVEL BED SHEETS

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ABSTRACT

A bed sheet may be designed to easily install on a mattress and may be designed to be placed over existing bedding. The bed sheet may act as a barrier between a sleeping person and the mattress, existing bedding, or both to deter vectors, pests, or both from passing from the mattress or bedding to a sleeping person.
TRAVEL BED SHEETS

RELATED APPLICATIONS

[0001] This application claims priority under 35 U.S.C. §119(e) to U.S. Provisional Application No. 61/098,142 titled Travel Bed Sheets and filed on Sep. 18, 2008, which is fully incorporated by reference herein.

TECHNICAL FIELD

[0002] The field of the present invention relates to bed sheets.

BACKGROUND

[0003] When people travel away from home they may spend the night with bedding accommodations that are unclean or unsanitary, may have chemical residue on them from being washed in harsh detergents, bleach, or other cleaning agents, or may otherwise irritate the skin. Additionally, vectors and pests may infest bedding, placing a person sleeping away from home at risk for contracting diseases or being bitten, especially by pests that feed on blood.

[0004] A bed pest is the dust mite, which feeds on skin flakes that are normally found in mattresses, pillows, and other bedding. Dust mites leave a trail of waste in the bedding that is highly allergenic to many people, and may cause wheezing in people affected with asthma. Dust mites may also be a factor in eczema, hay fever and other allergic ailments. Older mattresses in poorly ventilated rooms may have high concentrations of dust mites, especially if the mattress is more than 5 years old.

[0005] Typically, a set of sheets is bulky to carry with a traveler and are time consuming to place on a bed or over bedding. Many bed sheets, even ones with thread counts of 400 or more, are not designed to deter very small pests, such as dust mites, from traveling through the sheets. Typically, people concerned with vectors or pests in bedding may use a mattress cover to encase a mattress and vectors or pests from traveling from the mattress to a sleeping person. A mattress cover is typically an additional item used to supplement a bed sheet set, and mattress covers are typically not designed to be slept directly on. That is, many mattress covers are made from materials that are rough to the touch or otherwise not suitable for contacting skin during sleep. For these, and other reasons, travelers tend not to travel with a set of sheets or a mattress cover.

[0006] The present inventor has recognized a need for bed sheets that are compact and easy to pack, that install quickly and easily, and that protect a person from vectors and pests that may infest bedding.

SUMMARY

[0007] In a preferred configuration, the bed sheet includes a mattress covering portion and a top sheet portion attached to the mattress covering portion. A sidewall portion may be attached between the mattress covering portion and the top sheet portion, in other words, the top sheet portion may be connected to the sidewall portion and the sidewall portion may be connected to the mattress covering portion. Sections of the sidewall portion may include materials that stretch or the sidewall portion may be made from materials that stretch, such as Lycra®, Spandex®, elastic, or other suitable material. The sidewall portion is preferably one or more strips of material attached to the mattress covering portion to extend substantially perpendicular from the mattress covering portion towards the top sheet portion. The top sheet portion may preferably include an overlap or extension portion. The overlap or extension portion is preferably integral with the top sheet portion. And, the mattress covering portion may preferably include materials that stretch located in positions to assist securing the bed sheet to a mattress. The mattress covering portion and the top sheet portion are preferably constructed to deter vectors and pests from passing through, for example, by being tightly woven with a mean pore diameter of about 3 microns to about 5 microns per inch or by having an attached tightly woven layer, and are preferably constructed from materials that do not irritate a sleeping person’s skin.

[0008] In another preferred embodiment, pillowcases that include hidden fasteners are included as part of the bed sheet. Hidden fasteners include buttons and button holes, hook and loop type fasteners, snaps, or other suitable fastener that are concealed from view when fastened together. The pillowcases may be attached to the mattress covering portion, or may be detached. The pillowcases are preferably constructed to deter vectors and pests from passing through, and are preferably constructed from materials that do not irritate a sleeping person’s skin.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. 1 is a top, back, right-side oblique view of a preferred embodiment.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0010] Preferred embodiments will now be described with reference to the drawings. The preferred embodiments will be described in terms of a one-piece bed sheet. But, alternate components may be employed with bed sheets of different construction.

[0011] Additional aspects and advantages will be apparent from the following detailed description of preferred embodiments, which proceeds with reference to the accompanying drawings.

[0012] Certain embodiments may provide a bed sheet capable of being quickly installed on a mattress over existing bedding. Other embodiments may provide a bed sheet that is constructed to deter vectors and pests from passing through the bed sheet while providing a desirable sleeping surface. Yet other embodiments may encase a sleeping person in a cocoon that acts as a barrier between a sleeping person’s body and a mattress, bedding, or both, infested with vectors or pests.

[0013] The following detailed description of preferred embodiments describes preferred embodiments for a bed sheet that may address one or more of the above advantages or features, or may address different advantages or features.

[0014] FIG. 1 illustrates a preferred bed sheet having a mattress covering portion 20 and a top sheet portion 10. The mattress covering portion 20 and the top sheet portion 10 are preferably attached so they cooperate to form a bed sheet 5. For example, the top sheet portion 10 is attached to the mattress covering portion 20 along the length of the foot end 2 and along at least a portion of the length of the left and right sides of the mattress covering portion 20, as described in greater detail below.

[0015] The mattress covering portion 20 preferably resembles a fitted sheet, and includes four corners 45 joining
The corners 45 may include an elastic material, that is, a material with elastic properties. For example, an elastic material may be elastic, natural rubber, Neoprene®, Lycra®, or other suitable material, to assist holding the mattress covering portion 20 on the mattress 100. Alternatively, or in addition, the corners 45, the skirt-walls 50, or both, may include or be made from an elastic material. The material for the mattress covering portion 20 may include a common bed sheet material (such as 100% cotton, cotton/polyester blends, bamboo, silk, etc.) lined with a tightly woven cloth, preferably with a mean pore size of about 3 microns to about 5 microns per inch, and preferably 4.9 microns per inch. The mattress covering portion 20 preferably has a thread count ranging from 300 to 1000, and preferably 400. Other materials may be used for the mattress covering portion 20, such as bamboo, silk, satin, sateen, polyester, or other suitable material. Alternately, the material for the mattress covering portion 20 may include an extension 15 that extends past the ends of the mattress covering portion 20 by 1 foot to 3 feet, and preferably by 20 inches. Preferably, the extension 15 is integral with the top sheet portion 10. The top sheet portion 10 preferably has a mean pore size of about 3 microns to about 5 microns per inch and is preferably made from the same material as the mattress covering portion 20. But, the top sheet portion 10 may be made from a material different from the mattress covering portion 20. For example, the top sheet portion 10 may be made from silk and the mattress covering portion 20 may be made from bamboo. The material for the top sheet portion 10 may include a common bed sheet material (such as 100% cotton, cotton/polyester blends, bamboo, silk, etc.) where the common bed sheet material has a mean pore size greater than about 5.5 microns per inch and the common bed sheet material is lined with a tightly woven cloth, preferably with a mean pore size of about 3 microns to about 5 microns per inch, and preferably 4.9 microns per inch. Such a tightly woven cloth is preferably on the side that faces away from the mattress 100, that is, the side that does not contact a person’s body when lying between the mattress covering portion 20 and the top sheet portion 10.

Pillowcases 40 may be included as part of the bed sheet 5. Pillowcases 40 are preferably made from the same material as the mattress covering portion 20, that is, a suitable material with a mean pore size of about 3 microns to about 5 microns per inch, and are constructed to include hidden closures, such as zippers or Velcro®, at one end. Alternately, the pillowcases 40 may include a common bed sheet material lined with a tightly woven cloth, where the tightly woven cloth liner preferably has a mean pore size of about 3 microns to about 5 microns per inch, and preferably 4.9 microns per inch. Such a tightly woven cloth liner is preferably located on the side of the pillowcase 40 that faces the pillow. The pillowcases 40 are preferably separate from the mattress covering portion 20, but may be releasably or permanently attached to the mattress covering portion by an attachment structure such as Velcro®, snaps, buttons, or other suitable fastener, or sewing, gluing, or other suitable fastener.
are preferably 22 inches wide by 34 inches long for a preferred embodiment; and 23 inches wide by 38 inches long for an alternate embodiment.

The bed sheet 5 may also include a carrying container, such as a drawstring bag (not illustrated), or other suitable carrying container. Preferably, the carrying container is made from the same materials as the bed sheet 5. But, the carrying container may be made from different materials, including, but not limited to, rayon, nylon, bamboo, silk, or other suitable material. In an alternate embodiment, the carrying bag may be attached to the top sheet portion 10, the mattress covering portion 20, or a sidewall portion 25 in a manner that permits the bed sheet 5 to be stuffed into the carrying bag and also permits the bed sheet 5 to be placed over a bed with the carrying bag hanging from the bed sheet 5, for example, at the foot end 2. Such an embodiment may make the carrying bag less likely to become lost or misplaced.

Preferred sizes for the mattress covering portion 20 correspond to typical bed sizes and include 53 inches wide, by 75 inches long, by 12 inches high for one embodiment; 60 inches wide, by 80 inches long, by 12 inches high for an alternate embodiment; and 76 inches wide, by 80 inches long, by 14 inches high for another alternate embodiment.

The bed sheet 5 may be used by removing the bedspread or top cover (not illustrated) from bedding and securing the bed sheet 5 to the mattress over the existing sheets and/or other bedding (not illustrated) that are on the mattress. Thus, the bed sheet 5 may add an additional layer between a sleeping person and the mattress. An existing pillow and pillowcase may be placed inside the pillowcase 40, and the pillowcase 40 may be closed. After installing the bed sheet 5, the pillowcases 40, or both, a person may have a freshly made bed and pillows that may act as a barrier to deter dust mites, or other vectors or pests from reaching a person during sleep. The bedspread or top cover may be placed on top of the bed sheet 5, and the extension 15 of the top sheet portion 10 may be flipped over the bedspread or top cover to create a barrier so a sleeper’s arms may not touch the bedspread or top cover.

A notification card 60 may be included as part of the bed sheet 5. Preferably the notification card 60 bears markings indicating that the bed sheet 5 is personal to the traveler, and requesting that the bed is not changed. The markings may be in one, or in several, languages, and may be on one or both sides of the card. Alternately, the card 60 may be attached to the bed sheet 5, for example, by a tether or by sewing or gluing. Alternately, the card 60 may be part of the bed sheet 5 itself, preferably part of the extension 15 of the top sheet 10, for example, by printing, embroidering, or other suitable manner.

The bed sheet 5 may bear colors and/or patterns to differentiate the bed sheet 5 from hotel sheets, which are typically white. Including colors and/or patterns on the bed sheet 5 may help distinguish the bed sheet 5 from a hotel’s sheets.

When a traveler departs a room, the bed sheet 5 may be pulled from the mattress 100, rolled or folded, and placed back into a carrying bag or luggage. When a traveler arrives at home, the bed sheet 5 and/or pillowcases 40 may be laundered, refolded, and be ready for another journey.

It will be obvious to those having skill in the art that many changes may be made to the details of the above-described embodiments without departing from the underlying principles of the invention. For example, the dimensions provided above are preferred dimensions, but other suitable dimensions may be used. The scope of the present invention should, therefore, be determined only by the following claims.

1. A bed sheet comprising:
   a mattress covering portion including a first substantially planar side, an opposing second substantially planar side and a periphery defined by the first and second substantially planar sides;
   a skirt attached to a portion of the periphery of the mattress covering portion and extending away from the first substantially planar side, the skirt including a head skirt portion, a foot skirt portion, a left skirt portion and a right skirt portion;
   the head skirt portion connected to the left skirt portion to form a first corner;
   the left skirt portion connected to the foot skirt portion to form a second corner;
   the foot skirt portion connected to the right skirt portion to form a third corner;
   the right skirt portion connected to the head skirt portion to form a fourth corner;
   the skirt configured to assist holding the mattress covering portion on a bed;
   a top sheet portion permanently attached to the mattress covering portion along the entire foot skirt portion and at least a portion of each of the left and right skirt portions to create an enclosure between the mattress covering portion and the top sheet portion; and
   an extension portion extending from the top sheet portion, the extension portion not attached to the mattress covering portion.

2. A bed sheet according to claim 1 wherein the mattress covering portion, the top sheet portion and the extension portion are made from a fabric with a mean pore size of about 3 microns per inch to about 5 microns per inch.

3. A bed sheet according to claim 1 wherein the mattress covering portion, the top sheet portion and the extension portion are made from a bamboo fabric.

4. A bed sheet according to claim 2 wherein the mattress covering portion, the top sheet portion, and the extension portion are made from a fabric selected from the group consisting of 100% cotton, bamboo, silk, and a cotton/polyester blend.

5. A bed sheet according to claim 1 wherein the head, foot, left, and right skirt portions and the first, second, third, and fourth corners are made from one piece of material.

6. A bed sheet according to claim 1 further comprising an elastic material attached to the skirt distal from the mattress covering portion.

7. A bed sheet according to claim 1 wherein the head skirt portion, the foot skirt portion, the left skirt portion and the right skirt portion are made from an elastic material.

8. A bed sheet according to claim 1 wherein the first, second, third, and fourth corners are made from an elastic material.

9. A bed sheet according to claim 1 further comprising a tightly woven liner attached to the first substantially planar side of the mattress covering portion.

10. A bed sheet according to claim 1 further comprising a tightly woven liner attached to the top sheet portion on a side facing away from the mattress covering portion.

11. A bed sheet according to claim 1 wherein the skirt is attached to the entire periphery of the mattress covering portion.
12. A bed sheet according to claim 1, further comprising: a sidewall portion attached between the mattress covering portion and the top sheet portion, the sidewall portion extending along the mattress covering portion on the side opposite the skirt portion and along the length of the foot skirt portion and along the length of the left and right skirt portions to a point where the extension portion extends from the top sheet portion, the sidewall portion cooperating with the mattress covering portion and the top sheet portion to create the pocket.

13. A bed sheet according to claim 12, further comprising: an elastic material attached to the sidewall portion proximate the point where the extension portion extends from the top sheet portion.

14. A bed sheet according to claim 13, wherein the sidewall portion is higher near a foot end of the bed sheet than near the point where the extension portion extends from the top sheet portion.

15. A bed sheet according to claim 12, wherein the sidewall portion is made from an elastic material.

16. A bed sheet kit comprising:
   a bed sheet according to claim 1;
   a notification card; and
   a pillowcase including a hidden closure.

17. A bed sheet kit according to claim 16, wherein the notification card is attached to the bed sheet.

18. A bed sheet kit according to claim 16, wherein the notification card is part of the bed sheet.

19. A bed sheet kit according to claim 16, further comprising an attachment structure on the pillowcase and the mattress covering portion for attaching the pillowcase to the mattress covering portion.

20. A bed sheet kit according to claim 16, further comprising a carrying container.

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