United States Patent

Palenske

[15] **3,638,252**

[45] **Feb. 1, 1972**

[54] FITTED BEDSHEET

[72] Inventor: **Carlton L. Palenske**, Neenah, Wis.

[73] Assignee: **Kimberly-Clark Corporation**, Neenah, Wis.

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[52] **U.S. Cl.** **5/334**, 5/354

[51] **Int. Cl.** **A47g 9/00**

[58] **Field of Search** ..... 5/334 C, 334 R, 354

[56] **References Cited**

UNITED STATES PATENTS

3,056,245	10/1962	Baum et al.	5/334 C
3,321,782	5/1967	Hrubecky et al.	5/354

Primary Examiner—Bobby R. Gay
Assistant Examiner—Garry Moore
Attorney—Wolfe, Hubbard, Leydig, Voit & Osann, Ltd.

[57] **ABSTRACT**

A contoured bedsheet readily adaptable to folding and compact packaging which can be directly applied to a mattress without turning it inside-out prior to application. The bedsheet comprising a central rectangular portion, two side panels each of which has a common edge with the central portion, at least one end panel having a common edge with the central portion, and at least two corner sections each of which has a common edge with both a side panel and an end panel. In forming the sheet, the corner sections are inwardly folded and, for each section, the common edge between the section and the end panel is secured to the side panel along a line which extends from the intersection of the common edges of the corner section toward the edge of the side panel at an angle which is greater than 90° and less than 120° from the common edge between the corner section and the end panel.

4 Claims, 4 Drawing Figures

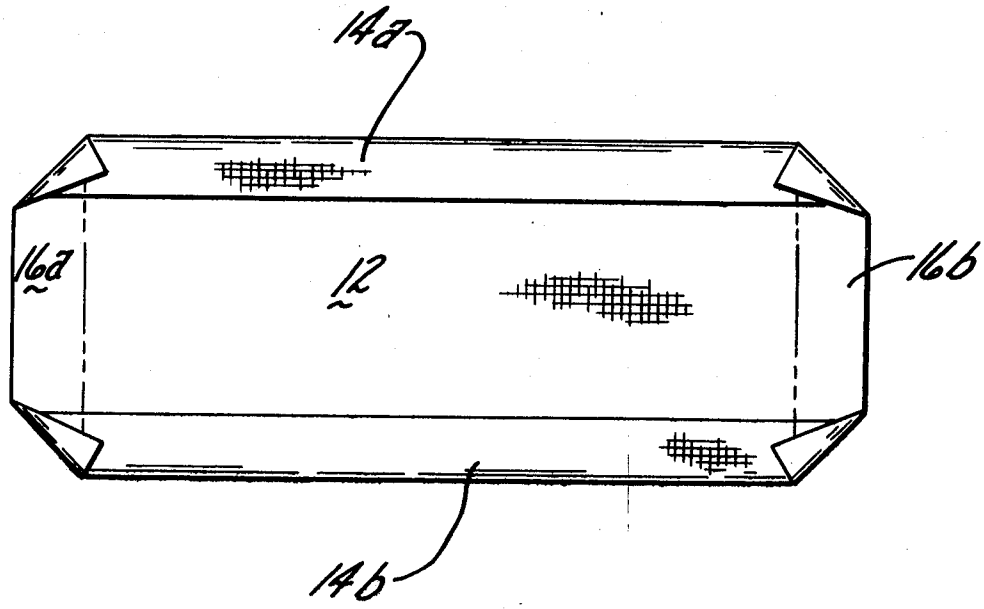
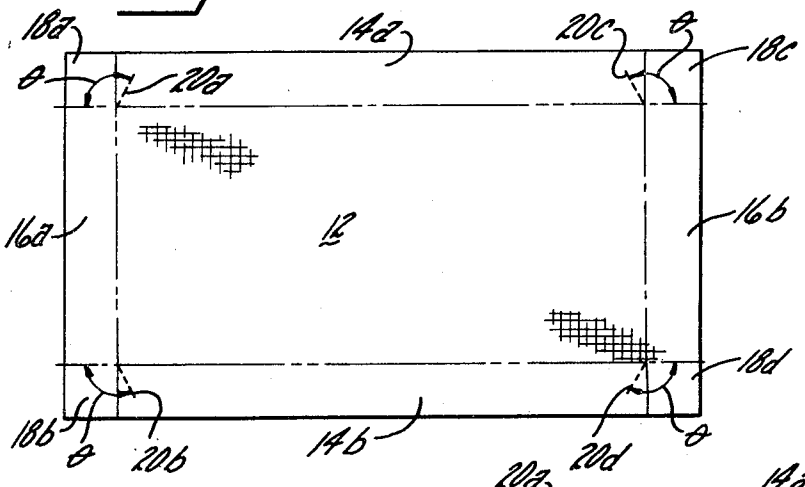


Fig. 1



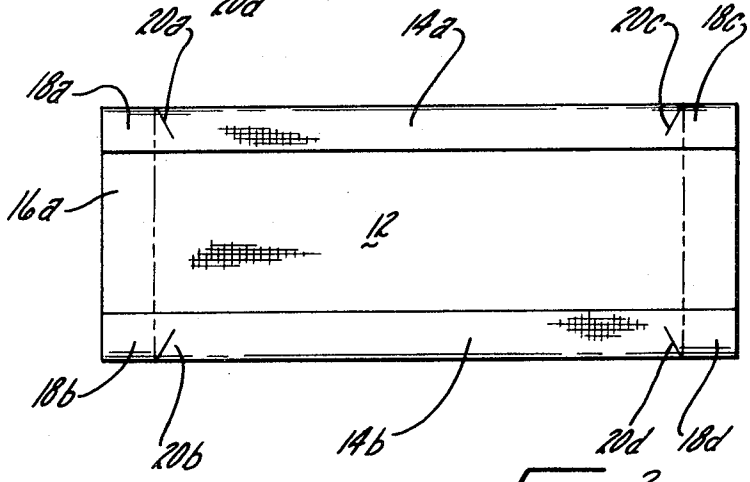


Fig. 2

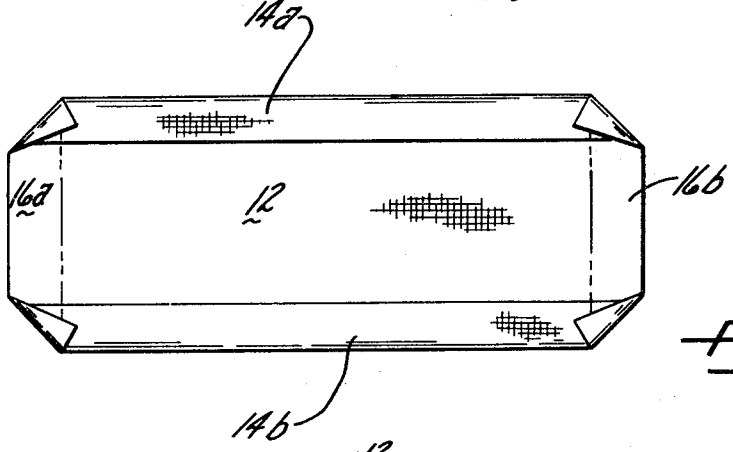


Fig. 3

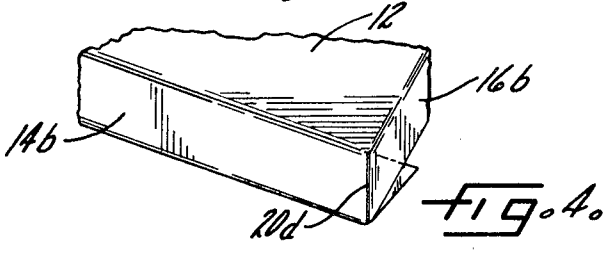


Fig. 4

INVENTOR.
CARLTON L. PALENSKE
BY
Wolfe, Hubbard, Voit & Osann
ATTORNEYS.

FITTED BEDSHEET

DESCRIPTION OF THE INVENTION

The present invention relates to bedsheets, and more particularly to simplified bedsheets with fitted corners.

Fitted or contour bedsheets are well known. In particular, Hrubecky (U.S. Pat. 3,321,782 issued May 30, 1967) concerns fitted bedsheets which are easy to manufacture and are readily adaptable to folding and compact packaging. While the disclosed bedsheets are quite satisfactory in actual use, in order to apply the sheet to the mattress it is necessary, for best appearance, to turn the fitted sheet inside out. By doing so, the sheet fits neatly over the mattress ends and does not have any protruding flaps, i.e., the folding flaps formed at the sheet corners are against the mattress surface. While Hrubecky's sheet possesses many advantages over previous fitted sheets, it would be desirable to provide a bedsheet which could be directly applied to the mattress without the necessity of turning the sheet inside out. Heretofore, the primary problems with providing such sheets have been that the finished sheets are not readily adaptable to folding and compact packaging, the sheets do not snugly fit around the mattress, and/or the sheets do not possess sufficient strength to maintain their contoured corner configuration in actual bed use.

Accordingly, it is an object of the present invention to provide a fitted bedsheet which can be prepared in a flat, compact form, and which can be directly applied to a mattress without the necessity of inverting the sheet prior to application. A further object is to provide such a sheet which snugly fits around a mattress and maintains its snug contoured configuration in actual use. Other objects and advantages of the present bedsheet will become apparent by reference to the following description and the accompanying drawings in which:

FIG. **1** is a top plan view of an elongate rectangular blank of sheet material from which a fitted sheet is formed.

FIG. **2** is a top plan view of the sheet material of FIG. **1** with the side panels folded over onto the central rectangular portion.

FIG. **3** is a plan view similar to FIG. **1** showing a finished bedsheet in flat form.

FIG. **4** is a fragmentary perspective view showing one corner of a sheet in place on a mattress.

While the invention is susceptible of various modifications and alternative constructions, there is shown in the drawings and will herein be described in detail the preferred embodiments. It is to be understood, however, that it is not intended to limit the invention to the specific forms disclosed. On the contrary, it is intended to cover all modifications and alternative constructions falling within the spirit and scope of the invention as expressed in the appended claims.

FIG. **1** shows a rectangular blank sheet of material **10** comprised of a central rectangular portion **12**, a pair of opposed side panels **14***a* and **14***b*, a pair of opposed end panels **16***a* and **16***b*, and four corner sections **18***a*, **18***b*, **18***c*, and **18***d*. The side panels **14***a* and **14***b* have a common edge with the central rectangular portion **12** as do the end panels **16***a* and **16***b*. Also, each of the corner sections has a common edge with an end panel and a side panel. The magnitude of the central portion and the side and end panels is selected to conform with the mattress being covered.

The surface of the sheet material shown in FIG. **1** will be in immediate contact with the mattress in the final bedsheet construction. On the back side of the sheet there are lines of adhesive **20***a*–**20***d*. Each of the adhesive lines extend from the intersection of the edges of a corner section which are common with a side and end panel toward the edge of a side panel at an angle θ from the common edge between the corner section and an end panel.

In preparing the illustrated bedsheet, the angle θ must be greater than about 90° and less than about 120°. Bedsheets prepared with such an angle form a very snug fit with a mattress since the sheet tends to envelope the mattress causing the resilient mattress to conform to the contoured corners. If θ is about 90° or less, the resulting bedsheet will not exert a conforming force on the mattress and, accordingly, a snug fit will not be achieved. Angles of θ greater than about 120° yield sheets which are difficult to apply and, when in place on a mattress, exhibit protrusions or puckers at the corners. Sheets wherein θ is about 95°–105° are very desirable, with sheets having θ equal to about 100° being particularly preferred.

In preparing the bedsheet illustrated in the drawings, the side panels **14***a* and **14***b* are folded so that the adhesive lines **20***a*–**20** are positioned on the top side. This configuration is shown in FIG. **2**. Thereafter, as shown in FIG. **3**, the corner sections are inwardly folded such that the edges of the corner section which are common with an end panel are along the lines of adhesive. After securing the common edges to the side panels by means of the adhesive, the resultant structure is essentially flat and forms a compact package. Instead of applying adhesive as shown in FIG. **1**, the adhesive can also be placed along the back side of the edges of the corner sections which are common with the end panels and, thereafter, the corner sections folded and secured as above described. Also, while the drawing illustrates a sheet with four contoured corners, sheets with only two contoured corners can also be similarly prepared.

The folded sheet shown in FIG. **3** can be directly placed on a mattress. When positioned, the side and end panels of the sheet extend down the sides and ends of the mattress, respectively. As shown in FIG. **4**, the loose flap formed in preparing the contoured corners is on the inside against the mattress surface. Thus, there is no need to invert the sheet prior to application. Also, as shown in FIG. **4**, the adhesive joint of the present bedsheet is along a line which is perpendicular to the top surface of the sheet. Such a configuration insures that the stresses which arise in actual use of the sheet will be placed on the bedsheet material itself, and not on the adhesive joint.

I claim as my invention:

1. A fitted sheet comprising a rectangular sheet of flexible material having a central rectangular portion a pair of opposed inwardly folded side panels each of which has a common edge with the central portion, at least one end panel having a common edge with the central portion, and at least two generally square corner sections each of which has a common edge with both a side panel and an end panel; each of the corner sections being inwardly folded such that the common edge between the corner section and the end panel is secured to the side panel along a line on the side panel extending from the intersection of both common edges of the corner section toward the outer edge of the side panel at an angle which, prior to folding, is greater than 90° and less than about 120° from the common edge between the corner section and the end panel.

2. The sheet of claim **1** wherein the common edge between the corner section and the end panel is secured to the side panel by means of adhesive bonding.

3. The sheet of claim **1** wherein the line along which the common edge between the corner section and the end panel is secured to the side panel is at an angle, prior to folding of about 95°–105° from the common edge between the corner section and the end panel.

4. The sheet of claim **3** wherein the angle is about 100°.

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