PERFORATED BED SHEET

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

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This application is a continuation-in-part of my co-pending application Ser. No. 258,929 filed Feb. 13, 1963, which application is a continuation-in-part of my earlier application Ser. No. 84,088 filed Jan. 23, 1961 both of which are now abandoned.

My invention relates to sheets, and more particularly to bed sheets or the like.

The prime object of my invention is to provide a bed sheet or cover that will protect the user from any draft that may pass over the bed yet permit the heat radiating from the body of the user to permeate through porous portions of the sheet.

It is manifest that the use of a covering such as a sheet over a person asleep is imperative at times, especially when the temperature of the room is low enough to demand it or when the air circulation in the room causes a draft that passes over the bed. It is also a known fact that the body temperature causes heat to radiate therefrom and that this body heat has no means of penetrating the sheet or covering and consequently builds up to a point where it becomes uncomfortable and as a result the occupant unconsciously moves the sheet aside exposing himself to a draft.

With the device described, illustrated and claimed herein, it is possible for the excess body heat to permeate through portions of the sheet therefore giving just enough heat for the comfort of the occupant of the bed and eliminating the tendency and attendant danger of removing the sheet and the hazard of exposing the body.

The device is simple in construction, easy to construct and highly efficient for the purpose intended.

Other and further objects of my invention will become more apparent as the description proceeds, when taken in conjunction with the drawings in which:

FIGURE 1 is a plan view of a bed sheet with the perforated sections inserted and arranged in a longitudinal pattern;

FIGURE 2 is another design showing the inserted perforated sections, angularly disposed and spaced apart from one another;

FIGURE 3 is an illustration of the bed sheet with the perforated sections circular in contour and arranged in staggered relation to one another;

FIGURE 4 shows a fanciful design with the portions of perforated material cut to a heart shape;

FIGURE 5 is a fragmentary enlarged illustration of the method employed for inserting the portions of perforated material;

FIGURE 6 is a fragmentary enlarged section of a sheet with the apertures or perforations stamped therethrough; and

FIGURE 7 is an exploded view of a material which can be utilized in the invention.

Similar characters of reference indicate corresponding parts throughout the several views, and referring now to the same, the character 10 in FIGURE 1 designates generally a bed sheet of the conventional type constructed of muslin, other cotton or any other type of woven material or fabric hemmed at its upper and lower edges 11 and 12, respectively, and sewed at 13 in the conventional manner.

There are openings cut out of the sheet 10. These openings may be of any shape, contour or design and sections of porous or perforated material such as cloth, mesh or netting shown as 14 are inserted into these openings and sewed at 15 as appears in the enlarged view of FIGURE 5, or attached in any other convenient or efficient manner. Mesh netting 15 is adequate for strength and insulation. The total area of the openings is approximately equal to or less than the remaining area of the sheet. The area of the openings is preferably approximately 10% to 50% of the overall sheet area.

In FIGURES 3 and 4 I show bed sheets 16 having sections 17 arranged in varied designs and spaced at periodic intervals or locations. In FIGURE 6 I show the sheet 16 constructed of pliable plastic or the like with perforations 18 punched therethrough in any convenient design.

The sheets 10 and 16 cover the occupant of the bed or the like acting as a protective covering as is conventional while the porous fabric 14 or the perforations 18 permits the body heat of the occupant of the bed to be dissipated therethrough thus preventing the excess heat radiating from the body to be retained by the sheet. The openings in the sheet, while permitting the dissipation of heat, are not so large as to prevent customary handling of the sheet.

In this regard sheets with relatively large apertures as appears in FIGURES 1-5 inclusive, are adequately reinforced by the cloth mesh.

Sheets formed in accordance with the present invention are preferably rectangular in outline and have a length and width corresponding to conventional bed sheet lengths and widths. The sheets may be folded completely flat and may be ironed with sweeping passes of an iron in customary fashion. The openings created no obstruction to ironing. The sheets may also be laundered in a conventional manner. They may be wadded or folded as usual in the handling of bed sheets.

The principles of the invention, as herein disclosed, may be used with widely varying types of material, as for example more or less conventional bed sheet material, and/or sheet plastic in the form of FIGURE 6. The principles of the invention may be readily utilized with inexpensive and disposable materials which may be formed from paper or paper-like materials. Sheets incorporating the principles of the invention may be conveniently formed from paper by employing two layers of paper 19 and 20 superimposed upon one another with a reinforcing mesh material 21 between the layers. This form of paper is commercially available and may be utilized with the principles of the present invention by cutting it into sheet lengths and widths of conventional dimensions while punching uniformly-spaced holes 22 of the size specified herein over the body of the sheet. This is illustrated in the exploded view of FIGURE 7. The paper used may be of high strength toweling stock or stock similar to toweling stock but with lesser absorptive properties. In some cases extremely thin and inexpensive plastic film material may be utilized as sheet material with the ventilating openings as herein described.

The thin materials, whether of conventional woven fabric material, plastic material or paper, with the ventilating apertures as described herein, are advantageous in terms of placement upon a bed, with or without an occupant. In this regard, the ventilating apertures allow escape of air when the sheet is placed upon a bed, while avoiding air pockets between the bed and the sheet. This provides a convenient smoothness and flatness of surface appearance. At the same time, the sheet does not cling to the body of a person covered with the sheet, by reason of the apertures therein.

Whereas I have shown and described an operative form of the invention, it should be understood that this showing and description thereof should be taken in an illustrative or diagrammatic sense only. There are many modifications in and to the invention which will fall within the scope and spirit thereof and which will be apparent...
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to those skilled in the art. The scope of the invention should be limited only by the scope of the hereinafter appended claims.

I claim:

1. A bed covering sheet including a generally rectangular body of thin, film-like, pliable sheet of a disposable paper-like and lightweight material and formed and adapted for use as a bed sheet covering, said sheet having a plurality of ventilating apertures formed in the body thereof, said apertures being generally uniformly spaced from one another over substantially the entire area of said sheet, said apertures having a size such that they have an area of approximately 10% to 50% of the overall area of the sheet, the opposite surfaces of said body being smooth and flat and free from obstructions to enable folding of the sheet in conventional fashion.

2. The structure of claim 1 wherein said sheet material is a two-ply paper similar to toweling stock and having a reinforced mesh material between the plies, the apertures being formed through said plies and said mesh material.

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