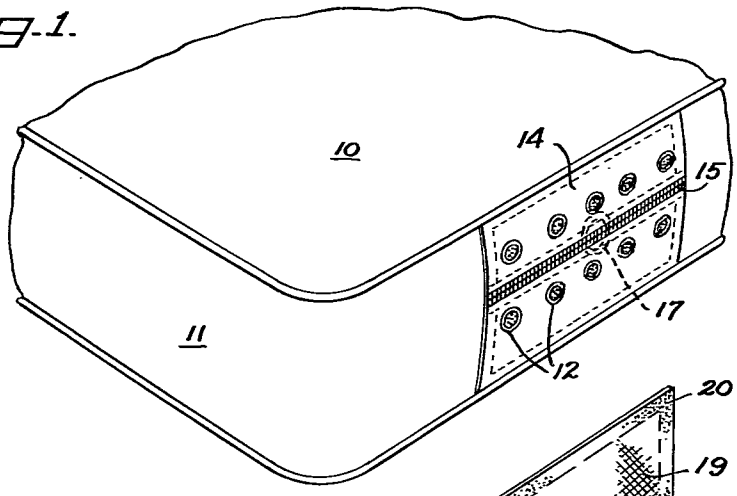
Nov. 3, 1964 I. F. HARRIS ETAL 3,154,798

MEANS TO FACILITATE GERMICIDAL TREATMENT OF MATTRESSES

Filed May 7, 1962

Fig. 1.



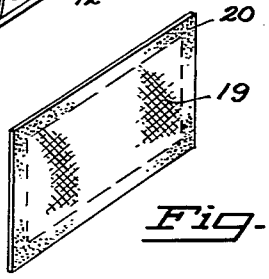
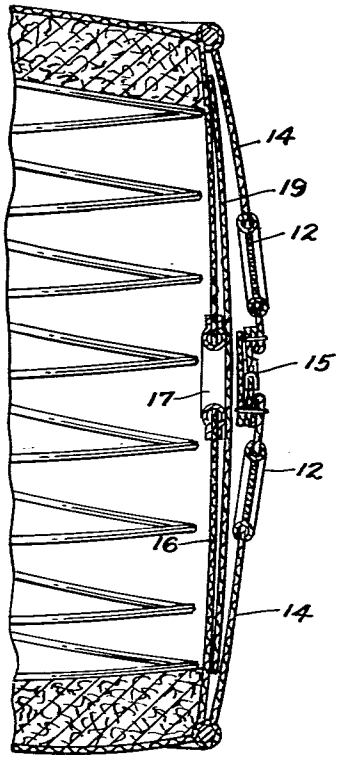


Fig. 3.

Fig. 2.



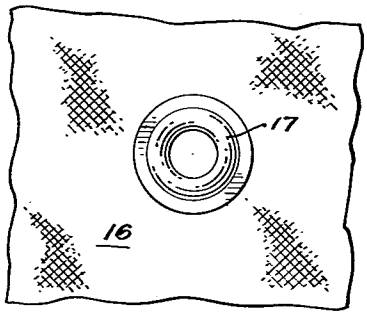


Fig. 4.

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MEANS TO FACILITATE GERMICIDAL TREATMENT OF MATTRESSES

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2 Claims. (Cl. 5—347)

This invention relates to means to facilitate germicidal treatment of mattresses by providing ready access to the interior of a mattress for introducing germicidal material and particularly to means for providing a constant germicidal atmosphere within the mattress.

Mattresses for beds in public places and particularly in hospitals become infested with germs or other disease carriers. Some hospitals have adapted the practice of treating mattresses by spraying them interiorly with a germicidal spray. Since few mattresses are provided with access means, the ticking is sometimes pierced to admit a spray nozzle or the like. This is harmful to the mattress and promotes rapid deterioration thereof.

It is an object of the present invention to provide a normally covered but readily accessible opening in the mattress for the insertion of a nozzle for fumigating the interior thereof.

A further object is to provide, in combination with such an opening, a means to insure a constant source of insecticide treated air to be breathed or drawn into the mattress as it is expanded and contracted due to shifting of or variation in the weight upon the mattress.

Further and more specific objects and advantages of the invention and the manner in which it is carried into practice are made apparent in the following specification by reference to the accompanying drawing.

In the drawing:

FIG. 1 is a perspective view of one corner of a mattress illustrating the manner in which the present invention is applied thereto;

FIG. 2 is a schematic cross-sectional view of an edge of the mattress taken through the center line of a pocket which forms a part of the present invention;

FIG. 3 is a perspective view of an air pervious germicidal pad used in connection with the invention; and

FIG. 4 is a fragmentary view in plan of an inner portion of the pocket construction shown in FIG. 2.

The mattress, one corner of which is shown at 10 in FIG. 1, has the usual side panel 11 extending around the entire periphery of the mattress between the top and bottom panels and it is now conventional practice to provide ticking for all of the panels which is impregnated with a vinyl type resin or other water proof material to permit easy cleaning of the mattress. The stitched seams are also sometimes sprayed with such a moisture proofing material and because a mattress so made is practically impervious to air it is desirable to provide ventilating means so that upon distortion or compression of the mattress due to variations or shifting in weight thereon it is enabled to breathe through the ventilators. A common type of ventilator is that shown in FIGS. 1 and 2 as a small grommet like device containing a screen or perforated plate illustrated at 12.

The present invention provides a plurality of such

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ventilators 12 in the outer parts 14 of a pocket which is applied to the exterior surface of the side panel 11 preferably in several places by means of conventional stitching or the like. The outer surface of the pocket is formed in two parts joined by a zipper shown at 15 so that it may be readily opened. The inner surface of the pocket is formed of a durable but loosely woven material 16 which replaces the panel 11 where the pocket is disposed so that the mattress may breathe through the ventilators 12 and material 16 in the usual manner. The inner panel 16 of the pocket is provided with a large grommet 17 (see also FIG. 4) which is exposed only when the zipper is opened and which provides for the insertion of a nozzle for spraying the interior of the mattress with a germicide. The mattress is shown schematically in FIG. 2 as having a hollow interior in which springs are contained in a conventional manner so that the inner surfaces of the mattress and springs are exposed to the germicidal spray.

It is recommended that mattresses particularly in hospitals be so sprayed either at regular intervals or at least after occupancy of a bed by each patient. Meanwhile it is desirable, however, to provide a constant germicidal atmosphere within the mattress and this is accomplished in the present invention by the use of a gauze pad such as illustrated at 19 in FIG. 3 which is preferably of several thicknesses and may be saturated with a germicide in liquid form. This gauze is loosely woven in the manner of ordinary surgical gauze and will admit the passage of air so that every movement or shifting of weight on the mattress will effect breathing inwardly and outwardly through the ventilators 12, the gauze pad 19 which is inserted in the pocket and the perforate inner wall 16 of the pocket. Consequently on each inward movement of air through the ventilators 12 not only is a germicidal atmosphere introduced to the interior of the mattress through the gauze pad but it also serves as a barrier to stop and destroy any germs or infectious substance which might be drawn through the ventilators. Such gauze pads may also be renewed at regular intervals to keep the mattress in perfectly safe condition.

As some difficulty may be encountered in inserting the moistened gauze pads in the pocket, the pads are preferably stiffened at their edges as by means of a wire frame or as shown in FIG. 3 by dipping the edges in a plastic material to provide a stiff marginal portion 20. Stiffening of the pads may also be accomplished by including a piece of crinoline or other stiff pervious material between the layers of gauze. While the pocket is shown with a zipper in the present application, other fastening means may be employed and furthermore the opening of the pocket may be adjacent one edge or an end thereof rather than along a center line as shown.

It has been established that the spread of disease in hospitals has been greatly reduced by mattress fumigation and the present invention not only facilitates such fumigation but provides means to maintain a constant germicidal atmosphere in and adjacent the mattress.

We claim:

1. In a mattress having a side panel, an area in said side panel formed of loosely woven material to permit free passage of air to and from the interior of the mattress, a grommet defining an opening in said area to permit the insertion of a germicide spray nozzle, a panel of ticking material covering said area and forming a pocket,

said pocket having an opening and a zipper for closing the opening, a plurality of spaced grommets defining openings through said covering, and a pervious germicide impregnated pad contained in said pocket and coextensive with the area of loosely woven material whereby breathing of the mattress must occur through said pad.

2. In a mattress having a side panel, an area in said side panel formed of loosely woven material to permit free passage of air to and from the interior of the mattress, a grommet defining an opening in said area to permit the insertion of a germicide spray nozzle, a panel of ticking material covering said area and forming a pocket, said pocket having an opening and a zipper for closing the opening, a plurality of spaced grommets defining openings through said covering, and a pervious pad contained in said pocket and coextensive with the area of loosely woven material whereby breathing of the mattress must occur through said pad.

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