

[54] THERAPEUTIC BED PAN

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[51] Int. Cl. .... A61g 9/00

[58] Field of Search ..... 4/1, 112, 113, 110, 4/111, 115, 142; 5/91, 347, 348; 128/33

[56] References Cited

UNITED STATES PATENTS

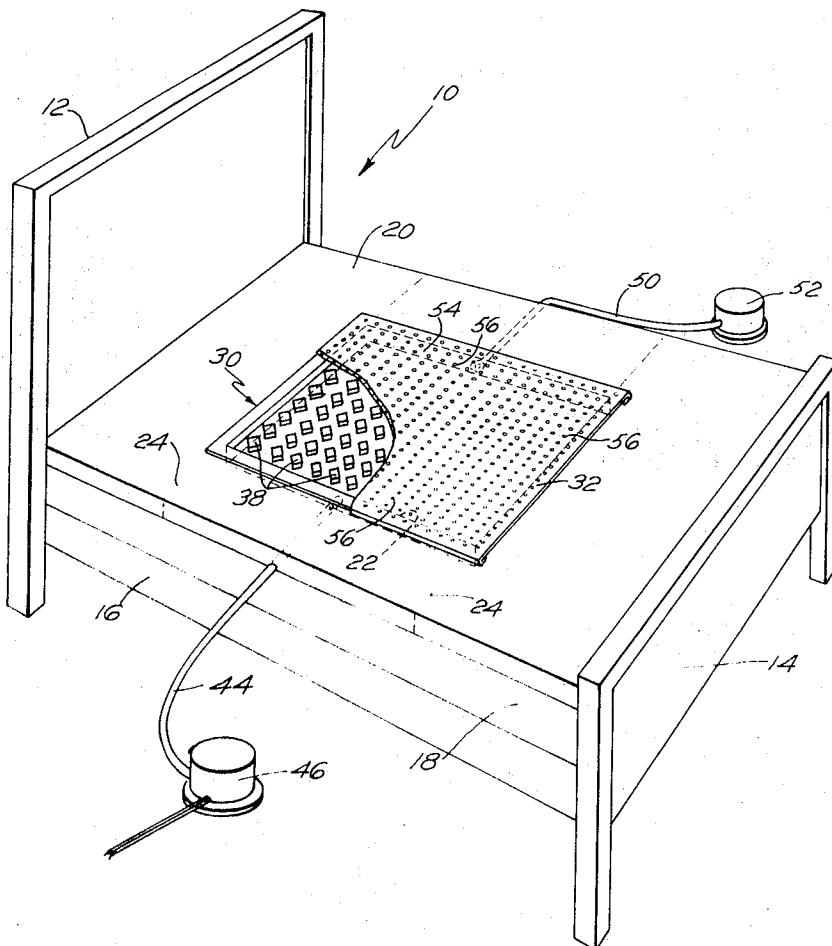
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Primary Examiner—Henry K. Artis  
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[57] ABSTRACT

A device for preventing bed sores having a bed pan and a foam pad. The foam pad normally rests upon the top of a bed mattress and has a central portion cut away to matingly receive the bed pan. The bed pan has a bottom wall with vertical walls extending upwardly around the periphery of the bottom wall. Outwardly extending lips are formed around the periphery of the vertical walls and these seat into a recess around the top of the opening so that they lie flush with the top of the foam pad. A plurality of laterally spaced hollow platforms extend upwardly from the bottom wall with the space between the platforms forming drain channels. An air intake nozzle is connected to one of the vertical walls of the bed pan and it in turn is connected to a source of air and oxygen under pressure whose mixture can be controlled. A drain nozzle is also connected to one of the sides of the bed pan adjacent the bottom thereof and it in turn is connected to a vacuum exhaust pump. A perforated cover is removably supported on top of the bed pan.

10 Claims, 4 Drawing Figures



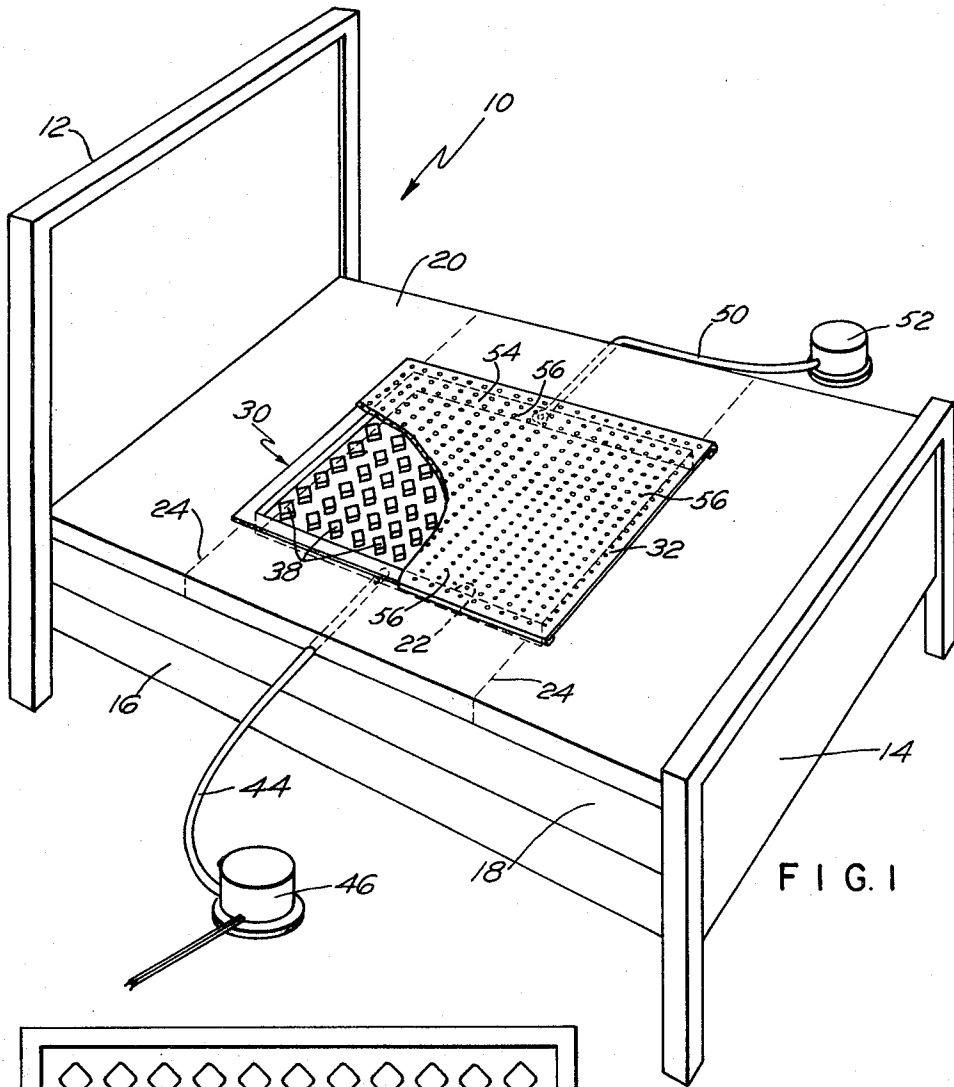


FIG. 1

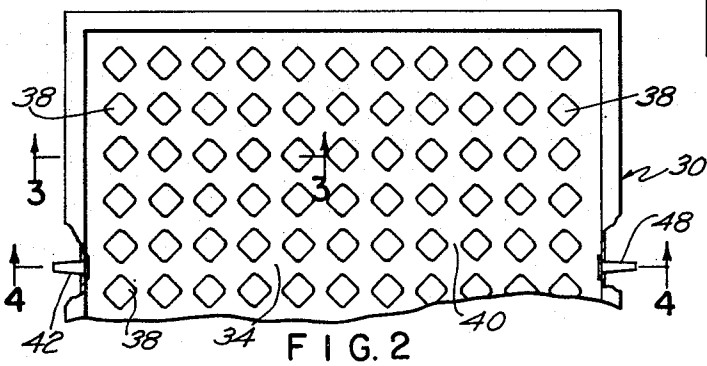


FIG. 2

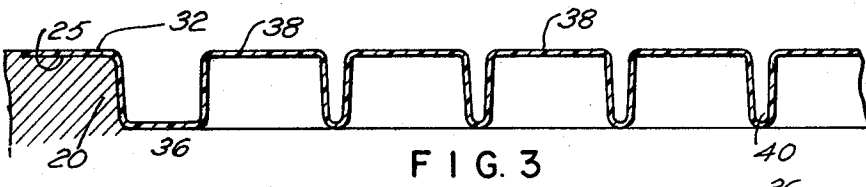


FIG. 3

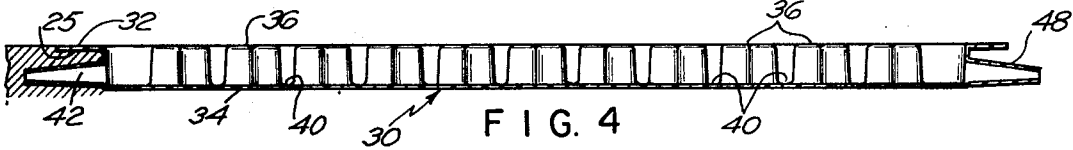


FIG. 4

## THERAPEUTIC BED PAN

## BACKGROUND OF THE INVENTION

This invention relates to a combination bed pan and foam pad unit to be used on beds being utilized by invalid patients and the like. In the past in nursing homes, hospitals, or in private homes where invalid patients with certain diseases and afflictions are bedridden, a problem arises from bed sores which these patients develop. These bed sores or decubitus ulcers result from a loss of blood circulation caused by pressure on the skin particularly pressure over a bony protuberance. The pressure on areas of support exceeds the mean capillary blood pressure and these areas are vulnerable to the decubitus ulcers. Other factors which contribute to decubitus ulcers are lack of proper ventilation, moisture and diet. Other problems in the past have resulted from body odors created by the patient due to poor or improper ventilation beneath the patient. Additionally the problem of bed wetting and the accumulation of the urine in the bed contribute both to the offensive odor and also to the bed sores of the patient since the moisture remains in the area of the patient's body.

Attempts have been made to remedy these conditions and prevent the decubitus ulcers but these have been unsuccessful. Some have involved merely the passing of air through the bed mattress which air is then allowed to pass upwardly around the patient's body. Here the problem of urine accumulation, however, has not been dealt with and thus there is no provision for its disposal. Other devices have had pulsatingly inflatable air mattresses which again merely allow the air to be circulated upwardly around the body of the patient.

## SUMMARY OF THE INVENTION

Applicant's novel device for preventing bed sores acts as a complete system to remove from the area of the bedridden patient any urine accumulation and also provide a proper air-oxygen mixture environment surrounding the patient's body. This device can be utilized with any normal bed already in existence and it is merely positioned on top of the mattress. The foam pad whose central portion is cut out to receive the bed pan member is first positioned on the bed. The bed pan is next positioned in the cutout portion of the pad. It has a bottom wall with vertical walls extending upwardly around the periphery of the bottom wall with outwardly extending lips around the periphery of the vertical walls. These outwardly extending lips have their top surface seating flush with the top of the foam pad. A plurality of laterally spaced hollow platforms extend upwardly from the bottom wall with the spaces between the platforms forming drain channels where any urine or other moisture beneath the patient may be accumulated. A drain nozzle formed on one side of the bed pan is connected to a tube having a vacuum exhaust pump attached thereto. In this manner any accumulation of moisture or liquid in the drain channels is automatically sucked out from the area below the patient. Also formed on the bed pan is an air intake nozzle that connects a tube from a source of air and oxygen that is supplied to the bed pan. A unit inserted in this tube may be utilized to vary the mixture of air and oxygen. A perforated cover of plastic is removably placed on top of the bed pan with the perforations accomplishing the double purpose of allowing moisture and liquid to drain downwardly therethrough and also allow the air

which is being pumped into the bed pan to rise upwardly around the body of the patient.

## DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of applicant's therapeutic bed pan unit;

FIG. 2 is a partial top plan view illustrating the bed pan;

FIG. 3 is an enlarged cross section view taken along lines 3—3 of FIG. 2;

FIG. 4 is an enlarged cross section view taken along lines 4—4 of FIG. 2.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings applicant's novel device is shown utilized with a normal hospital bed generally designated numeral 10. It has a regular headboard 12, a footboard 14 and connecting cross rails 16. A mattress 18 is supported thereon. Atop the mattress is a pad 20 made from a foamed plastic material such as polyethylene.

The foam pad 20 may be formed from an integral sheet having a cutout section 22 in its central portion that matingly receives bed pan 30 or alternatively the pad may be made from components that are seam welded as illustrated along lines 24 and have a cutout section formed in the center. The area adjacent the top surface of cutout section 22 has a recess 25 formed therein so that lip 32 of the bed pan will have its top surface seated flush with the top of foam pad 20.

Bed pan 30 and its structure are best understood by referring to FIGS. 2 thru 4 which illustrate that it has a bottom wall 34 with vertical walls 30 extending upwardly around the bottom wall. Also a plurality of laterally spaced hollow platforms 38 extend upwardly from said bottom wall with the space between the platforms forming drain channels 40. These platforms are normally flexible so that they have a cushioning effect on the underside of the patient. The number and the shape of these platforms may be varied according to the amount of weight to be supported by the platforms and also according to manufacturing considerations. Attached to one of the side walls is an air intake nozzle or port 42 to which tube 44 is attached. The opposite end of tube 44 is connected to an air and oxygen mixer 46 which can control the proportions of pressurized oxygen and air to be released into the bed pan. Formed on one of the other vertical walls of the bed pan is the liquid drain nozzle or port 48 adjacent the bottom of the bed pan. Tube 50 is connected to this nozzle with its opposite end being connected to vacuum exhaust pump 52 that sucks all accumulated liquid and moisture out of the bed pan. Atop the bed pan is removably supported the perforated cover 54 whose apertures 56 allow urine from the patient and moisture which has accumulated under the patient to drain downwardly into the bed pan and at the same time allow the mixture of air and oxygen which has been pumped into the bed pan to rise around the body of the patient and provide a therapeutic effect. The bed pan and the perforated cover both would normally be molded out of plastic material and each would normally be molded as integral units.

What is claimed is:

1. A therapeutic bed pan unit comprising a bed pan having a bottom wall with vertical walls extending up-

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wardly from around the periphery of said bottom wall, a plurality of laterally spaced platforms extending upwardly from said bottom wall with the spaces between the platforms forming drain channels, a drain nozzle connected to a vertical wall of said bed pan, to exhaust any liquid that accumulates in the bottom of said bed pan, an air intake nozzle connected to one side of said bed pan to supply the interior of said bed pan with air.

2. A therapeutic bed pan unit as recited in claim 1 further comprising exhaust pump means connected to said drain nozzle.

3. A therapeutic bed pan unit as recited in claim 1 further comprising compressed air means connected to said air intake nozzle.

4. A therapeutic bed pan unit as recited in claim 3 wherein said compressed air means comprises an air and oxygen mixer.

5. A therapeutic bed pan unit as recited in claim 1 wherein said bed pan is molded in an integral piece.

6. A therapeutic bed pan unit as recited in claim 5 wherein said platforms are hollow.

7. A therapeutic bed pan unit as recited in claim 6 wherein said bed pan has an outwardly extending lip around the periphery of the vertical walls.

8. A therapeutic bed pan unit as recited in claim 6 wherein said bed pan is made of plastic material.

9. A therapeutic bed pan unit as recited in claim 6 further comprising a perforated cover.

10. A therapeutic bed pan unit as recited in claim 1 further comprising a pad having a cutout section in its central portion that receives said bed pan and which would normally be set upon the top of a bed mattress.

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