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PRESSURE-RELIEVING PAD

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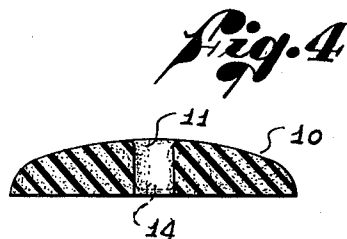
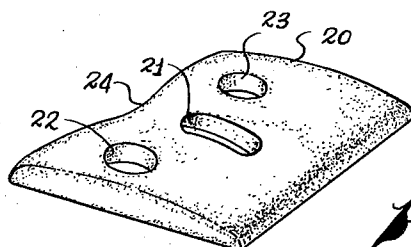
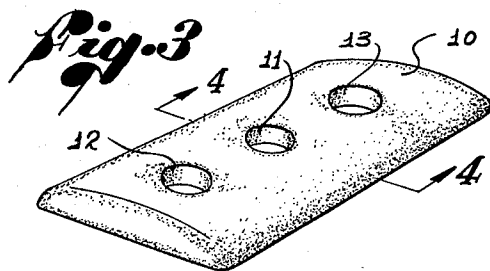
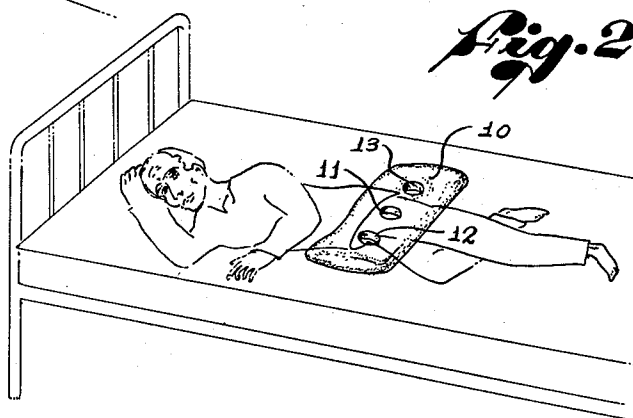
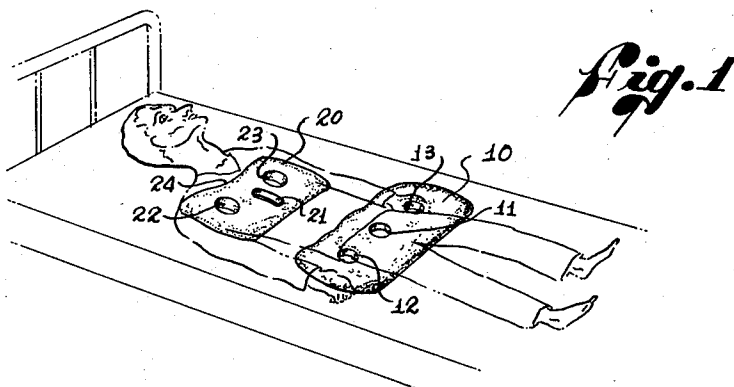


Fig. 5
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PRESSURE-RELIEVING PAD

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4 Claims. (Cl. 5—338)

This invention relates generally to pressure-relieving pads, and more particularly to pads of this type intended to relieve the pressure on a relatively bony portion of the human body when the person is relatively immobile, as in the case of certain patients in hospitals and sanitariums.

In the nursing and care of invalids, it has long been a problem to prevent the occurrence of bed sores and to aid in their healing, particularly where the patient must remain relatively immovable for a long period of time. Thus, the blood circulation of an invalid is generally much poorer than that of an ambulatory person, and some patients, by reason of weakness or other disability, are unable to move so that they can change their position within the bed. These patients, when placed in one position by the nurse or attendant, must remain in that position until they are again moved by the nurse or attendant. While this condition is unpleasant enough, certain bony portions of the body, such as the hips, shoulder blades, spine, and coccyx cause a concentration of pressure on those portions of the flesh adjacent the bony areas. As a result, these areas are among the first to become painful, and very often bed sores are produced.

Heretofore various forms of pressure-relieving pads have been used, including continuous resilient cushions, such as sponge rubber sheets and pads, and members having an aperture in them, such as annular cushions. While each of the previous forms has been of some assistance in reducing the pain and discomfort of the patient, each of the prior devices has been subject to certain disadvantages, and neither the patient nor the nurse has been satisfied with the products heretofore available. For example, in the case of a helpless patient, if the nurse turns the patient from one side to the other, in addition to turning, the patient also moves from one side of the bed to the other. If an annular pressure-relieving pad of the type heretofore available is used, the pad must also be moved from its first position, where it relieved the pressure on one hip of the patient, to a second position, usually on the opposite side of the bed, where the pad relieves the pressure on the opposite hip of the patient. To insert the pad where it is needed requires the lifting of at least a portion of the patient's body so that the pad may be slipped beneath him. The patient is thus handled more, which is generally unpleasant to the patient, and requires additional work on the part of the nurse or attendant.

It is a major object of this invention to provide a pressure-relieving pad for use with invalids, which pad is adapted to relieve the pressure around a plurality of areas without being moved.

Another object of the invention is to provide such a pad that can be used for different areas of the body, such as the upper back or thoracic area, and the lumbar or hip area.

It is a further object of the invention to provide pads of this type that, in addition to relieving pressure about the bony portions of the body, do not add other sources

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of irritation, but instead provide greater overall comfort for the patient.

Still another object of the invention is to provide such a pad that is inexpensive and lightweight, and does not rapidly deteriorate with continued use.

It is a still further object of the invention to provide such a pressure-relieving pad that is formed of a material that does not cause an allergic reaction in patients, and which is easily cleaned and sanitized.

These and other objects and advantages of the invention will become apparent from the following description of one form thereof, and of a modification of that form, in which:

Figure 1 is a perspective view of a pair of pads placed upon a hospital bed, one pad being the upper or thoracic pad, and the other pad being the lower or lumbar pad, with a patient indicated in phantom outline, shown upon the pads;

Figure 2 is a perspective view of the lumbar pad as it might appear upon a hospital bed, a patient in another position being shown in phantom outline;

Figure 3 is a perspective view of a pad constructed in accordance with this invention, this pad corresponding to the lumbar pads shown in Figures 1 and 2;

Figure 4 is a cross-sectional view of the pad shown in Figure 3, taken on the line 4—4 of Figure 3; and

Figure 5 is a perspective view of a slightly modified form of pad, generally similar to the pad shown in Figure 3, but with the apertures slightly changed. The pad shown in Figure 5 corresponds to the thoracic pad shown in Figure 1.

Referring now to the drawings, and particularly to Figures 1 and 2 thereof, the numeral 10 indicates a pressure-relieving pad of a resilient material adapted to provide support to the body of the patient. While the pad 10 is shown in Figures 1 and 2 as being in the lumbar position, it will be seen that it may be used to relieve pressure on the upper portions of the back, where it will be in the thoracic position.

As best seen in Figures 3 and 4, the pad 10 is of a generally elongated shape and is usually of a length to extend across the major portion of a hospital bed. The width of the pad 10 is sufficient to cover the area being protected and to distribute the weight of that portion of the patient over a larger area, and for an adult, the length of the pad may be of the order of 32", while its width may be of the order of 15". For exceptionally larger persons, the pad may be made bigger, and for children and smaller persons, the pad may be made smaller. The thickness of the pad 10 will be governed by the resilience of the material of which it is constructed, and also by the weight of the patient. However, in general, it will be of the order of 3", and as illustrated in Figures 3 and 4, the edges of the pad 10 are tapered or rounded so that there will be no sharp edges or corners that might rub against the patient and irritate the skin.

Centrally located in the pad 10 is an aperture 11 extending from the upper surface of the pad toward the lower surface. The upper end of the aperture 11 is preferably flared so that there are no sharp edges surrounding the aperture, but instead the upper surface curves smoothly into the aperture. The aperture 11 is shown as having a generally circular configuration, but this may be varied to meet different conditions, and while the size of the aperture will depend upon its shape and the use to which it is to be placed, the opening will in general be of the order of two to four inches.

Spaced outwardly from the aperture 11 are additional apertures 12 and 13, generally similarly constructed, and generally of approximately the same size as the central aperture. When used as a lumbar pad, the pad 10 will have the outer apertures 12 and 13 spaced from the

central aperture 11 a distance approximately equal to the distance from the spine to the bony portion of the hip. Generally, the centers of each of the outer apertures 12 and 13 are of the order of 11" from the center of the central aperture 11. Thus, the centers of the outer apertures 12 and 13 are approximately 22" apart. With this spacing, the average patient may be rolled from a position where he is lying on one hip, to the opposite position where he is lying on the other hip and each hip will extend into the corresponding apertures 12 and 13. The lower end of the spine, under these circumstances, will fit into the central aperture 11, and the size of the apertures is generally sufficient to accommodate persons of slightly different size.

The material of which the pad 10 is constructed may take any of a variety of forms. As mentioned, the pad should be resilient, and perhaps one of the most satisfactory materials is one identified as a polyester foam. Such a material is available in different degrees of softness, and generally should be molded to form the pad 10, thereby forming a smooth and substantially impervious surface or "skin" on the exterior of the pad. Such a material generally does not cause any allergic reaction in the patient, and the impervious "skin" permits the pad to be cleaned quickly and easily, and prevents the absorption of liquids and odors. For most patients, the pad should be formed of a "firm density" polyester foam, as this term is known in the trade, and in this manner, sufficient support will be given to relieve any undesired concentration of pressure. In any event, the pad should be sufficiently soft to conform to the general shape of the patient's body, and sufficiently firm to support the body without being completely compressed at any point.

It is not essential that the apertures 11 extend completely through the pad 10, and in some cases, such as to provide the desired mechanical strength of the entire pad, it may be advisable to leave the lower end of the aperture closed, as indicated by the dotted line 14 in Figure 4. The actual depth of the aperture is relatively unimportant, so long as the pressure exerted by the body is distributed over a larger area so that sores and painful areas will not develop.

In Figure 5 there is illustrated a slightly modified form of pad 20 in which the central aperture 21, corresponding to the central aperture 11 of the pad 10, is elongated to receive a portion of the spinal column. The outer apertures 22 and 23, corresponding to the outer apertures 12 and 13 of the lumbar pad 10, are generally located closer to one side of the pad, and that side may be made slightly concave, as at 24, to prevent interference with the head and neck. The shoulder blades of the patient fit into the apertures 22 and 23, and thus while a patient is lying on his back, as indicated in Figure 1, the bony portions of the upper part of the body, including the spinal column and the shoulder blades, are protected by the pad.

To provide complete protection and pressure relief for a patient, it is often desirable to use both the thoracic and the lumbar pads, as illustrated in Figure 1. The size of the pads is such that both may be used for the average patient without any interference or overlapping of the pads, and they will still provide complete protection for the major bony portions of the torso. In the case of small persons and children, the pads may be placed in abutting position, and in the case of larger persons, the pads may be separated the required amount.

Under some conditions, it may be desirable to cover the pads with a fabric or similar sheet material that may more easily be washed. Generally, this is not necessary, but if the patient objects to using a pad that may have been in contact with another patient, the cover may very easily be used. The covering may be provided by the bottom sheet of the bed, or may be a separate casing that is applied to the individual pad.

One of the important features of the present pad is that it provides a plurality of apertures to receive different

bony portions of the body, thereby providing increased protection, and reducing the amount of work that must be performed by the nurse or attendant in moving the patient. Prior pads for this purpose have generally had but a single aperture, which does not provide protection for the spine and the two shoulder blades, and, when used in the lumbar region, requires that the pad be moved from the central or spinal position to one of the hip positions when the patient is moved.

While the pad has been illustrated as being used with a bed patient, it will be appreciated that its use is not so restricted. Thus, for example, patients who must spend many hours in a wheel chair find the pad of great value to them.

From the foregoing, it will be seen that there has been provided a pressure-relieving pad fully capable of achieving the objects and securing the advantages heretofore set forth. While there has been shown and described a preferred and modified form of the invention, the patent is not to be limited to the particular form or arrangement of parts herein described and shown, except as limited by the following claims.

I claim:

1. A pressure-relieving pad of the class described which includes: a body member of resilient foam construction adapted to extend across a recumbent person's torso, said body member being of generally rectangular construction and of a stiffness such that it will conform to the person's torso while not being completely compressed in the areas of greatest pressure concentration, said body member having a centrally located aperture adapted to receive a portion of the bony spinal area of said person and a pair of spaced apertures located on opposite sides of said centrally located aperture and adapted to receive other bony areas spaced outwardly from said spinal area, the edges of said body member being rounded, said apertures reducing the pressure otherwise exerted on said person's body in the immediate vicinity of said areas and more uniformly distributing it over a greater area.

2. A pressure-relieving pad of the class described which includes: a body member of resilient foam construction adapted to extend across the lumbar portion of a person's back, said body member being of generally rectangular shape and of a stiffness such that it will conform to the person's body while not being completely compressed in the areas of greatest pressure concentration, said body member having a centrally located aperture adapted to receive the lower spinal area of said person and a pair of spaced apertures located on opposite sides of said centrally located aperture and adapted to receive the hip areas of said person when said person is lying on his side, said apertures reducing the pressure otherwise exerted on said person's body in the immediate vicinity of said areas and more uniformly distributing it over a greater area.

3. A pressure-relieving pad of the class described which includes: a body member of resilient foam construction shaped to extend across a bed transversely to a recumbent person's torso, said body member being of generally rectangular construction and of a stiffness such that it will conform to the person's torso while not being completely compressed in the areas of greatest pressure concentration, said body member having a centrally located aperture adapted to receive a portion of the bony spinal area of a recumbent person, and having a pair of spaced apertures located on opposite sides of said centrally located aperture and adapted to receive other outwardly located bony areas of a person in said recumbent position, the edges of said body member being rounded to provide a transition zone between the pad-supported and unsupported portions of said person's torso.

4. A pressure relieving pad of the class described which includes: a body member of resilient foam construction and of generally rectangular shape, having a width sufficient to extend over the lumbar area of a recumbent

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person and a length sufficient to extend materially beyond both sides of said person, the stiffness of said body member being such that it will conform to the shape of the recumbent person's body while not being completely compressed in the areas of greatest pressure concentration, 5 said body member having a centrally located aperture adapted to receive the lower spinal area of said recumbent person when said person is on his back, and having a pair of spaced apertures on opposite sides of said centrally located aperture, each of said spaced apertures 10 being positioned to receive one of the hip areas of said recumbent person when he is on his side, said apertures being so spaced from each other that they are aligned with their corresponding bony areas as said recumbent 15 person is turned from one side to the other, said apertures reducing the pressure otherwise exerted on said recum-

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bent person's body in the immediate vicinity of said areas and more uniformly distributing it over a greater area.

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