

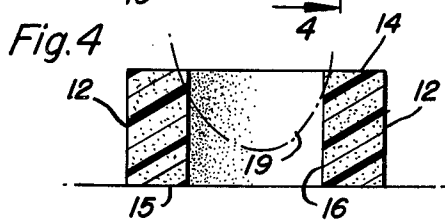
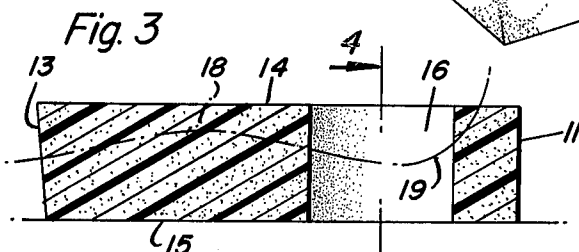
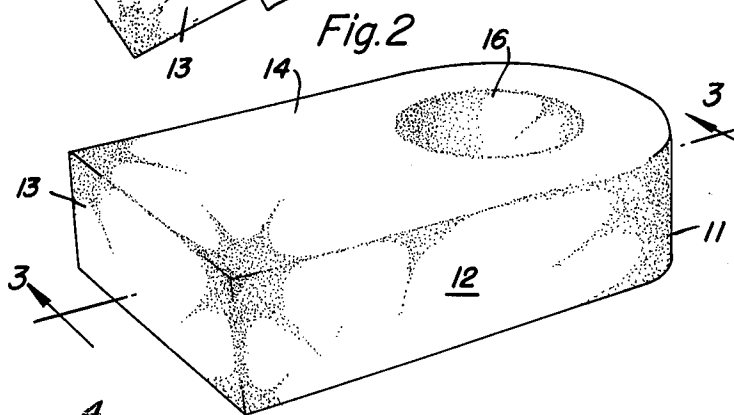
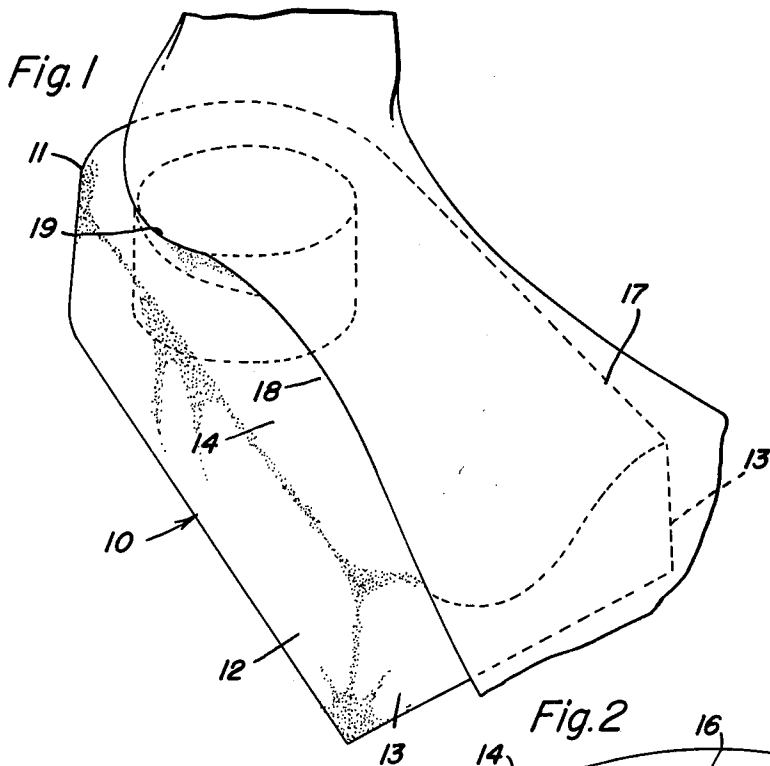
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INVALID HEEL PAD

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INVALID HEEL PAD

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13 Claims. (Cl. 128—132)

The present invention relates to an invalid heel pad and has for an object the provision of a device of this character adapted to be used on patients who are invalids, that is, a patient who has had paralysis, or whose leg is in traction, or one who cannot move his leg or legs.

It is an object of the present invention to provide a heel pad of this type which will prevent the development of a pressure sore on the back of the heel.

Such patients must lie in bed on their backs and the heel bone makes a pressure against the mattress and causes a heel pressure sore to develop in the heel bone area. Such sores are very painful and cause the patient much suffering and discomfort and are very difficult to heal since the heel bone is only covered substantially by the skin. This is a problem which has existed for many many years and the nurses who attend have attempted to solve this vexing problem of long standing by rolling up with a piece of bandage and some cotton a little donut-shaped ring which the nurse placed under the heel of the patient. It has been found that it takes a nurse about thirty minutes to make one of these devices and at best they are only a makeshift and have proved very unsatisfactory in the past.

It is an object of the present invention to overcome this difficulty which has long vexed the medical profession and in one of its broadest aspects the present invention contemplates the provision of an invalid heel pad comprising a resilient element adapted to be placed under the heel and lower portion of a leg of the invalid, said element having an opening adjacent one end thereof to receive the heel bone area of the heel of the invalid so that the heel bone area is supported in that space to prevent the development of a pressure sore in the heel bone area.

More specifically the present invention contemplates the provision of an invalid heel pad comprising a resilient element adapted to be placed under the heel and lower portion of a leg of the invalid, said element having an opening adjacent one end thereof to receive the heel bone area of the heel of the invalid so that the heel bone area is supported in space to prevent the development of a pressure sore in the heel bone area and said element has a portion adapted to support the leg of the invalid when the element is positioned under the heel and lower portion of the leg of the invalid so that the heel bone area is relieved of all pressure, said element having a length between six inches and ten inches, a width between three and a half inches and six inches, and a thickness between one and one-half inches and four inches, said opening having a diameter between one and three-fourth inches and two and one-fourth inches, and the density of the said element being in the range between about one pound per cubic foot and about three pounds per cubic foot.

The present invention aims to provide an invalid heel pad of this kind which is resilient and yielding and for this purpose may be made of polyethylene, polyurethane, foam rubber, Curon which is made by Curtiss-Wright Corporation, Poly-Kool-Foam manufactured by Dayton Rubber Company, of Dayton, Ohio, or any other suitable material.

A further aim of the present invention is to provide an invalid heel pad which is of relatively small size so that an adequate supply of these pads can be kept on hand in hospitals and the like for ready availability when needed.

With the foregoing and other objects in view, the in-

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vention will be hereinafter more fully described and more particularly pointed out in the appended claims.

In the drawings in which the same parts are denoted by the same reference numerals throughout the several

5 views,

FIGURE 1 is a perspective view of the invalid heel pad constructed in accordance with the present invention and illustrating its application to the leg of a patient,

FIGURE 2 is a perspective view of the device by

10 itself, FIGURE 3 is a sectional view taken on the line 3—3 of FIGURE 2, and

FIGURE 4 is a sectional view taken on the line 4—4 of FIGURE 3.

15 Referring more particularly to the drawings, 10 generally indicates the invalid heel pad made in accordance with the present invention. The pad 10 is a generally oblong-shaped block of resilient material which may be made of polyethylene, polyurethane, foam rubber, Curon (made by Curtiss-Wright Corporation), Poly-Kool-Foam (manufactured by Dayton Rubber Company, of Dayton, Ohio), or any other suitable resilient and yieldable material.

20 The pad 10 has a forward arcuate-shaped end or wall 11 which merges into the parallel side walls 12. The pad 10 at its end remote from the arcuate-shaped end 11 has a rear end or wall 13. The pad 10 also has an upper flat surface 14 and a lower flat surface 15.

25 There is provided in the pad 10 a through opening 16 which opens through the upper surface 14 and the lower surface 15. A portion of this opening 16 is located within the forward arcuate-shaped end 11 and the portion of the pad adjacent thereto and the center of the opening 16 is equally spaced from the parallel side walls 35 12 of the pad. It will be noted that the major portion of the area of the pad 10 is disposed rearwardly of the opening 16 for supporting the heel cord area and the adjacent lower portion of the leg 17 of a patient.

40 After much experimentation it has been found that the most desirable density of the pad 10 lies in the range between about one pound per cubic foot and about three pounds per cubic foot, or when expressed on the compressibility scale, the range is from 40 to 60.

45 Experience has also taught that the most desirable dimensions for the pad 10 are that it have a length between six inches and ten inches, a width between three and one-half inches and six inches, and a thickness between one and one-half inches and four inches, and that the opening 16 have a diameter between one and three-fourths inches and two and one-fourth inches. The dimensions of the pad 10 which have been found to be best for the majority of patients is that it have a length of seven and one-fourth inches, a width of four inches, and a thickness of one and three-fourths inches and that the opening 16 have a diameter of two inches.

50 Of course these densities and dimensions can be increased or decreased to meet the requirements of individual patients.

60 In the use of the device an invalid heel pad 10 will be placed under the leg 17 of an invalid patient so that the opening 16 of the pad receives the heel bone area of the invalid's leg and the heel cord area and the lower portion of the leg of the invalid are received and supported by the major portion of the upper surface 14 of the pad which lies between the opening 16 and the rear end wall 13 of the pad. The heel cord area of the leg of the patient is indicated at 18 and the heel bone area is indicated at 19.

70 It is well-known that the hard rounded back of the heel bone 19 will not tolerate pressure but will develop a pressure sore while the heel cord area 18 will tolerate such pressure without developing a sore. Accordingly, as

can be observed particularly from FIGURES 1, 3 and 4 of the drawings, when the pad 10 is in proper position below the leg 17 the heel cord area 18 will be supported by the upper surface 14 of the pad and the heel bone area will be supported in space without contacting either the pad or the mattress or other bed coverings.

The nature of the material from which the pad 10 is made is such that it will resist movement with respect to the bed covers even under the force or pressure which might be exerted upon the pad by the leg of the patient so that once the pad is properly positioned by the nurse or other attendant it will remain in its proper position. Also, the arcuate or arch-shaped end 11 of the pad will eliminate any sharp corners or angles against which the upper sheet or other bed covering might engage and in arranging the bed covers might tend to displace the pad from its proper position. In the use of the pad it is immaterial whether or not the surface 14 or 15 is uppermost.

While I have described a preferred embodiment of my invention, it is understood that this disclosure is for the purpose of illustration and that various omissions, or changes in arrangements of parts, as well as the substitution of equivalent elements for those herein shown and described, may be made without departing from the spirit and scope of the invention as set forth in the appended claims.

What I claim is:

1. An invalid heel pad comprising a resilient element adapted to be placed under the heel and lower portion of a leg of an invalid, said resilient element including means to receive the heel bone area of the leg of the invalid comprising an opening adjacent one end of the element and means to support the heel cord area of the leg of the invalid comprising an uninterrupted surface extending from said opening toward the other end of the element by which the heel cord area is supported so that the heel bone area is supported in space to prevent the development of a pressure sore in the heel bone area.

2. An invalid heel pad as claimed in claim 1, wherein said element is made of polyethylene.

3. An invalid heel pad as claimed in claim 1, wherein said element is made of polyurethane.

4. An invalid heel pad as claimed in claim 1, wherein said element is made of foam rubber.

5. An invalid heel pad as claimed in claim 1, wherein said element is made of Curon.

6. An invalid heel pad as claimed in claim 1 wherein said element is made of Poly-Kool-Foam.

7. An invalid heel pad comprising a resilient element adapted to be placed under the heel and lower portion of a leg of the invalid, said element having an opening in one end portion thereof to receive the heel bone area of the heel of the invalid and a portion extending rearwardly from said opening adapted to engage and support the heel cord area of the leg of the invalid so that the heel bone area is supported in space to prevent the development of a pressure sore in the heel bone area, the density of said element being in the range between about one pound per cubic foot and about three pounds per cubic foot.

8. An invalid heel pad comprising a resilient element adapted to be placed under the heel and lower portion of the leg of the invalid, said element having an opening in one end portion thereof to receive the heel bone area of the heel of the invalid and a portion extending rearwardly from said opening adapted to engage and support the heel cord area of the leg of the invalid so that the heel bone area is supported in space to prevent the development of a pressure sore in the heel bone area, the density of said element on the compressibility scale being in the range from 40 to 60,

9. An invalid heel pad comprising a resilient element adapted to be placed under the heel and lower portion of the leg of the invalid, said element having an opening in one end portion thereof to receive the heel bone area of the heel of the invalid and a portion extending rearwardly from said opening adapted to engage and support the heel cord area of the leg of the invalid so that the heel bone area is supported in space to prevent the development of a pressure sore in the heel bone area, said element having a length between six inches and ten inches, a width between three and one-half inches and six inches and a thickness between one and one-half inches to four inches, and said opening having a diameter between one and three-fourths inches and two and one-fourth inches.

10. An invalid heel pad comprising a resilient element adapted to be placed under the heel and lower portion of the leg of the invalid, said element having an opening in one end portion thereof to receive the heel bone area of the heel of the invalid and a portion extending rearwardly from said opening to the opposite end of the element adapted to engage and support the heel cord of the leg of the invalid so that the heel bone area is supported in space to prevent the development of a pressure sore in the heel bone area, said element having a length of seven and one-fourth inches, a width of four inches and the thickness of one and three-fourths inches, and said opening having a diameter of two inches.

11. An invalid peel pad comprising a resilient element adapted to be placed under the heel bone area and the heel cord area of a leg of an invalid, said element comprising a block having opposite end walls emerging into opposite side walls and a lower flat surface for resting on a bed and an upper surface for supporting the leg of the invalid, said block having an opening located adjacent one of said end walls to receive the heel bone area of the heel of the invalid and a sufficient portion of the said upper surface being disposed between said opening and the other end wall of said end walls to support the heel cord area of the leg of the invalid so that the heel bone area is supported in space to prevent the development of a pressure sore in the heel bone area.

12. An invalid heel pad comprising a resilient element adapted to be placed under the heel bone area and the heel cord area of a leg of an invalid, said element comprising an oblong-shaped block having a forward-arcuate-shaped end wall which merges into parallel side walls, upper and lower flat surfaces and having an opening located within the forward-arcuate-shaped end to receive the heel bone area of the heel of the invalid and the major portion of the area of the block being disposed rearwardly of said opening for supporting the heel cord area of the leg of the invalid so that the heel bone area is supported in space to prevent the development of a pressure sore in the heel bone area.

13. An invalid heel pad as claimed in claim 9, wherein the density of said element is in the range between about one pound per cubic foot and about three pounds per cubic foot.

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