

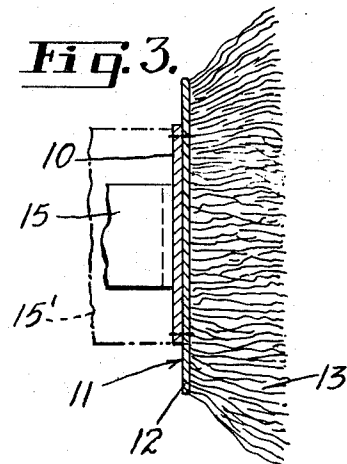
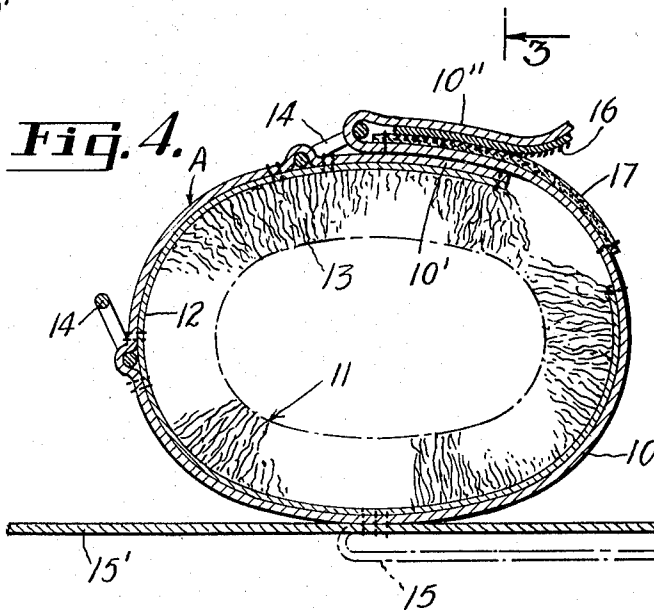
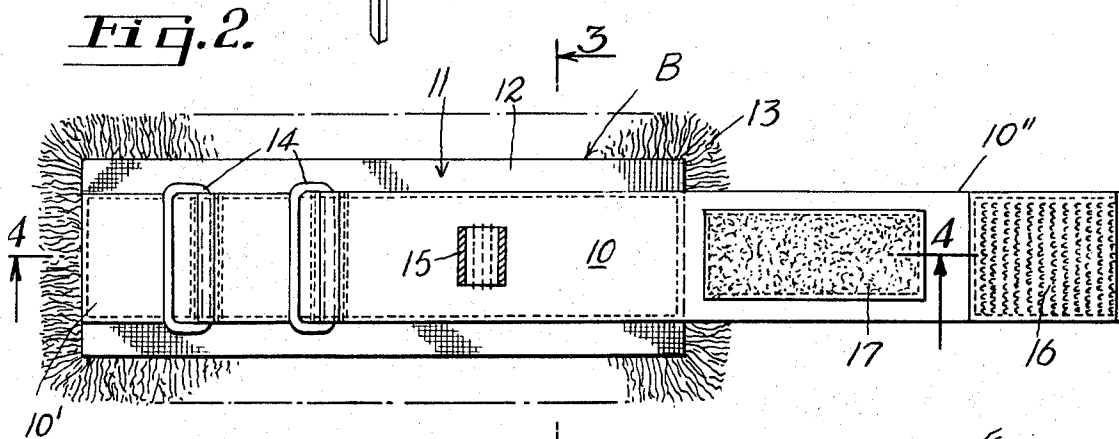
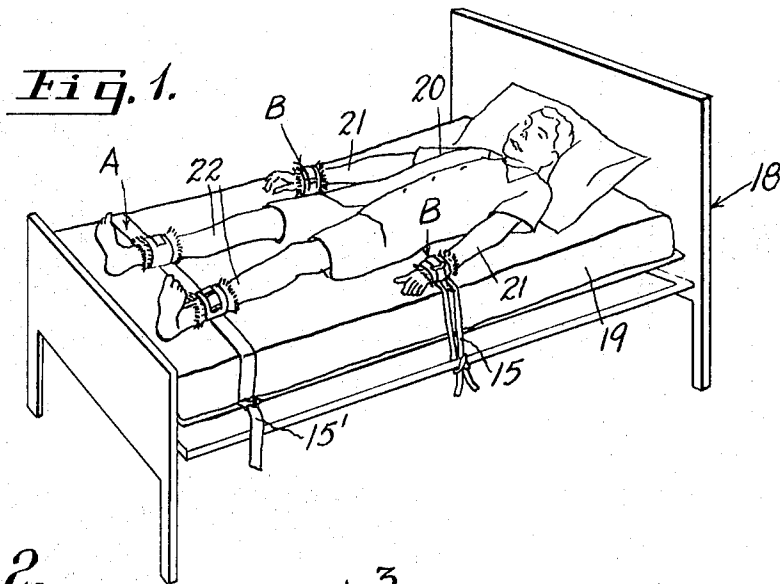
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RESTRAINT DEVICE FOR MOUNTING UPON WRIST AND ANKLES

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RESTRAINT DEVICE FOR MOUNTING UPON WRIST AND ANKLES

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1 Claim

ABSTRACT OF THE DISCLOSURE

A restraint device for support of a patient upon a bed for retaining arms and legs separately and/or collectively in predetermined positions in control of movement of a patient while lying upon a bed, the device comprising one or more wrist or ankle encircling adjustable bands, preferably having cushioned interiors or liners, with securing straps coupled with the bands for attachment to parts of a bedstead, particularly wherein adjustment of the bands is through the medium of spaced metallic loops and Velcro coupling means.

The invention deals with devices of the type and kind under consideration, wherein the wrist and ankle engaging portions are simple and economical in construction and, wherein adjustments for fit upon the patient can be quickly and easily accomplished and wherein the restraint is cushioned by the padding or lining on the bands employed and, in dual uses of the device, the bands are fixed in predetermined spaced relationship to each other in controlling positioning of the arms and the legs upon the bed.

The novel features of the invention will be best understood from the following description, when taken together with the accompanying drawing, in which certain embodiments of the invention are disclosed and, in which the separate parts are designated by suitable reference characters in each of the views and in which:

FIG. 1 is a diagrammatic perspective view illustrating, by way of example, single devices for restraining the arms and dual devices for restraining the legs of a patient.

FIG. 2 is an enlarged plan view of one of the bands in extended position in illustrating the securing strap partially in section.

FIG. 3 is a section on the line 3-3 of FIG. 2, omitting background showing and indicating, in dot-dash lines, the form of the device as shown on the legs of the patient in FIG. 1; and

FIG. 4 is a sectional view of the device taken generally on the line 4-4 of FIG. 2, illustrating the band in coupled position as appearing, for example, on one of the legs of the patient in FIG. 1 and illustrating, in dot-dash lines, the band, including the strap, as appearing, for example, on the wrist of the patient in FIG. 1.

Devices of the type and kind under consideration are produced in two different categories, one wherein a pair of the limb encircling bands are disposed in fixed spaced relationship to each other on a single coupling strap, as shown at A on the diagrammatic leg illustration in FIG. 1, and the other is wherein each of the bands are independently used in support of the limbs as, for example, the devices as applied to the wrist, as at B in the diagrammatic showing in FIG. 1. In the first instance, wide straps are employed; whereas, in the second instance, narrow straps are preferably used. In both instances, however, the limb engaging bands are of identical construction.

In FIG. 2 of the drawing, one the bands 10 is shown in extended position. To one end portion of the band is fixed a cushioning element 11, comprising a fabric binder tape 12, supporting a cushioning pile 13, comprising a

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multiplicity of strands of any suitable fibrous material or synthetic material. The tape 12 is wider than the band 10, as clearly illustrated, and fixed to the band 10 in spaced relationship to each other are two metallic loops 14 adjacent what might be termed the free end portion 10' of the band. Fixed to the band 10 in the environment of the tape 12 is the securing strap 15 which, in FIG. 2, is the narrow strap as employed on the wrist restraining devices B, diagrammatically shown in FIG. 1 of the drawing. The strap 15 is shown, in part, in FIG. 3. However, in this figure, the wider strap 15' is illustrated, in part, in dot-dash lines and this is the type of strap used, for example, in the mounting of the double type A on the ankle restraining devices, as diagrammatically shown in FIG. 1 of the drawing. It would also be used on the double type of device as applied to support of the wrists. Extending beyond the element 11 is what might be termed the coupling end 10'' of the band, having the Velcro couplings, the male portion of which is diagrammatically illustrated at 16 and the female portion which is shown at 17. In the present illustration, 16 runs the full width of the band 10; whereas, the female portion 17 is narrower and extends a substantial distance longitudinally of the band 10.

In the diagrammatic sectional view, FIG. 4, the device is shown as one of the two members of the dual device A, incorporating the wide strap 15', applied to a limb, as diagrammatically seen in FIG. 1, with the coupling end 10'' passed through one of the loops 14. It will be understood that the coupling end 10'' can also be coupled with the other loop in a smaller size adjustment and, in both couplings, the male and female portions 16 and 17 are capable of providing a snug pressure engagement with the limb, while retaining reasonable comfort by virtue of the cushioning pile on the surface of the band encircling the limb. The cushioning pile also prevents chafing or other injury to the limb.

In the full line showing of the strap 15' in FIG. 4 of the drawing, the purpose is to illustrate that only one of the two limb engaging bands is shown. In other words, there would be another band in fixed spaced relationship to the one illustrated, for example, to the left of the one shown; whereas, the dot-dash showing at 15 would illustrate the device as applied to the single band structure B, as illustrated upon the wrist of the patient in FIG. 1 of the drawing. This type of showing is done to minimize extensive drawings and unnecessary description to illustrate the two distinct uses of the restraining devices in question, in other words, in the diagrammatic showing in FIG. 1, both straps could have two bands thereon, in other words, the wrist bands, as well as the leg bands and, in like manner, each of the bands for the wrists and the legs could be independent bands, as shown on the wrist by way of illustration.

Considering FIG. 1 of the drawing, 18 diagrammatically represents a hospital bed and it will be noted that the straps 15, 15' are coupled with frames or springs of the bed supporting the mattress 19, upon the patient lies, as indicated at 20. 21 represents the patient's arms and 22 represents the patient's legs, with which are coupled the restraining devices B and A, respectively.

Devices of the type and kind under consideration may be laundered to maintain sanitary conditions at all times in repeated uses of the restraining devices or, in other words, are washable and autoclavable. The present use illustrations are only by way of example, as the devices can be coupled with any type or kind of support.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A limb restraining device for support of a limb of a person to a bed or the like, said device comprising: a limb band,

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a cushioning element secured to the inner surface of said band at a first end portion thereof, said cushioning element having a greater width than the width of said band,

a releasable securing means comprising;

a male Velcro coupling member rigidly fixed to a 5 second end of said band, and

a female Velcro coupling member spaced from said male Velcro member,

loop means secured to the outer surface of said band 10 at said first end portion, and

strap means fixed to the outer surface of said band at said first end portion of said band to secure said device to said bed whereby placement of said limb band around said limb of said person with said cushioning element in juxtaposition to said limb and with 15 said second end of said band passed through said

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loop means to couple said male Velcro member with said female Velcro member, thereby to snugly support said limb of said person to said bed.

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