

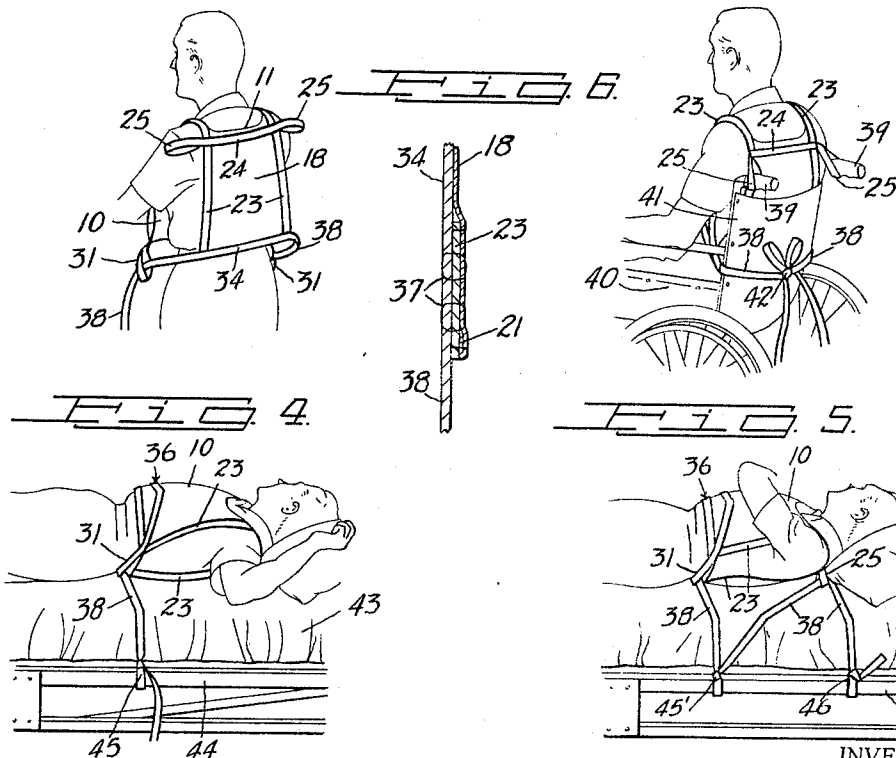
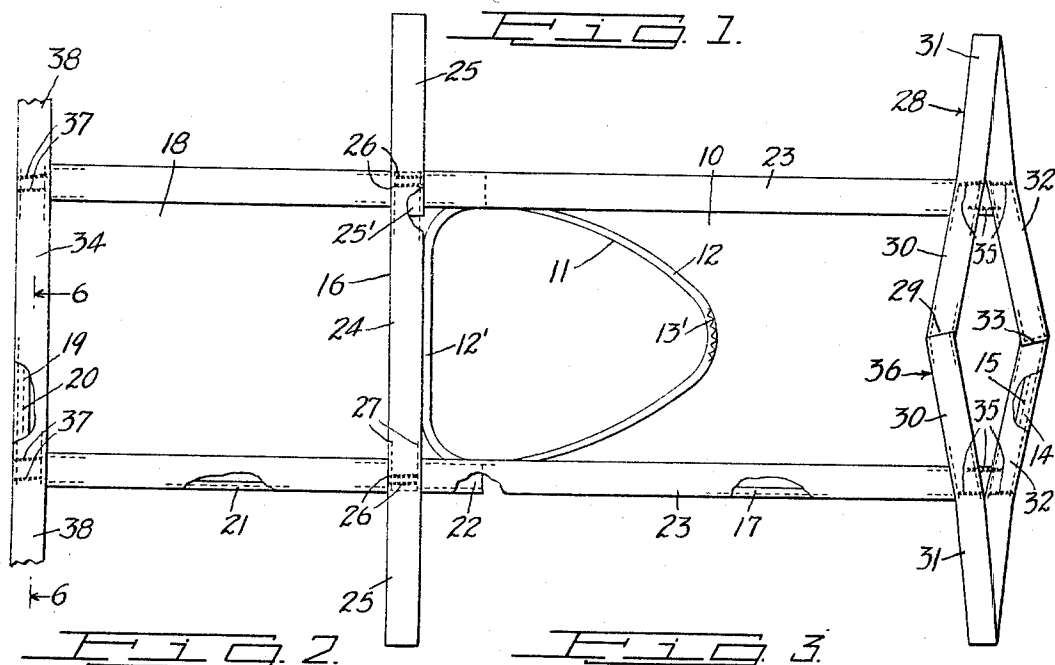
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C. E. MURCOTT

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MULTI-PURPOSE SAFETY VEST

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INVENTOR.
CHARLES E. MURCOTT
BY

Howard E. Thompson
ATTORNEY

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MULTI-PURPOSE SAFETY VEST

Charles E. Murcott, Huntington, N.Y., assignor to General Medical Equipment Corp., Bay Shore, N.Y., a corporation of New York

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This application constitutes a continuation-in-part of the structure shown in my prior applications, Serial Numbers 458,720 and 458,721 both filed May 25, 1965.

This invention deals with a safety vest for use in support of a patient in a wheelchair or other chair or upon a bed to prevent accidental displacement of the patient from the chair or bed while, at the same time, providing reasonable body movement. The body movement in question is from side to side, particularly when the patient is arranged upon a bed. More particularly, the invention deals with a safety vest structure which is simplified to the extent of providing thereon one long strap, having ends extending laterally from sides of a back panel and utilized in conjunction with two pairs of loops. One pair of loops are disposed at the top of the back panel and the other pair of loops are disposed at the lower end portion of the front panel of the vest.

Still more particularly, the invention deals in the provision of a dual strap abdominal supporting section at the lower portion of the chest panel and disposed between the pair of loops at sides of the lower portion of the chest panel.

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 plan view of a safety vest, with parts of the construction broken away and diagrammatically illustrating, in part, the stitching employed and showing the ends of the tie strap broken away.

FIG. 2 is a diagrammatic perspective view illustrating arrangement of the vest upon the body of the wearer, preparatory to attachment to a chair, bed or the like, the strap structure of the vest being bordered by heavy lines to clearly illustrate the vest upon the wearer.

FIG. 3 is a diagrammatic perspective view showing attachment of the vest to a wheelchair.

FIGS. 4 and 5 are diagrammatic perspective views illustrating two methods of securing a patient while arranged upon a bed; and

FIG. 6 is an enlarged diagrammatic sectional view on the line 6-6 of FIG. 1, no attempt being made to illustrate the fabric characteristics.

Considering FIG. 1 of the drawing, 10 represents a front or chest panel of suitable strong fabric having, adjacent the upper edge portion thereof, a head opening 11, with a bound edge 12 stitched to 10, as illustrated, in part, at 13. The lower hemmed edge 14 of the panel 10 is flared laterally to the sides, as clearly shown, the hem being initially secured in place by a stitching 15. The upper edge of the panel 10 terminates beyond the opening, in other words, at the edge 16 and the side edges of the panel are hemmed as illustrated, in part, at 17. These last hemmed edges, however, do not necessarily have the initial stitching, as noted at 15.

At 18 is shown the back panel which has a lower hemmed edge 19, with a stitching 20, similar to the stitching 15, the panel 18 having hemmed side edges, as illustrated, in part, at 21. The upper end of the back panel terminates in the binding, as at 12', and at sides of the upper portion of the back panel are extensions 22 extending onto upper sides of the front panel, one of these

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side extensions only being shown in the broken away portion. At this time, it will be apparent that the front and back panels can be formed of a single piece of material but, to simplify the construction, separate parts are employed, preferably of the same material, but secured together as defined.

The sides of both panels 10 and 18 are reinforced by wide straps or webbings 23 which extend from the lower edge of the back panel to the lower edge of the front panel. Extending transversely across the upper edge portion of the back panel is a cross shoulder strap 24, ends of which extend beyond sides of the panels and then backwardly to form side back loops 25 at their ends. The returned free ends of the strap 24 are arranged upon the straps 23, one of these ends being shown at 25' at the top of FIG. 1 and the loops of the strap 24 are reinforced in attachment to the straps 23 by double stitchings, as diagrammatically seen at 26. The strap 24 is stitched to the straps 23 and the back panel 18 at side edges thereof, as indicated, in part, at 27.

At the lower portion of the front or chest panel 10 is attached another cross-strap assemblage 28, comprising a single strap folded centrally, as seen at 29, to extend side portions 30 downwardly in the direction of the lower corner portions of the front panel. The strap then extends at both sides of the front panel and turns back upon itself to form side loops 31 and other end portions 32 of the loops 31 extend downwardly and angularly along the hemmed edge 14 of the front panel, the ends of the strap being secured together, as at 33. The portions 30 and 32 are stitched at their side edges to the panel 10, as illustrated, in part, in the drawing. These stitchings also extend onto the side straps 23, as diagrammatically illustrated, in part.

At this time, it is pointed out that the various stitchings of the straps are only shown in part throughout, these illustrations being at end portions of the straps 23, for example, as well as adjacent the cross-strap 24, as well as adjacent the bottom tie strap 34 secured to the lower edge of the back panel 18.

The strap 28, where it is arranged upon the lower front ends of the straps 23, has reinforced stitchings, as at 35, to reinforce attachment of the loops 31 with the front panel and the straps 23 fixed thereto. For purposes of description, the more or less diamond-shaped arrangement of the strap portions 30, 32 upon the lower portion of the front chest panel 10 provides what might be termed an abdominal supporting shield portion 36 to provide a more free or less binding support upon the body of the wearer.

The tie strap 34 has reinforced stitchings 37 directly upon the lower ends of the side straps 23 and the lower corner portions of the panel 18. The ends 38 of the tie strap extend beyond side edges of the back panel to various lengths in different sizes of vest but, in an average adult size, could extend approximately seven feet to compensate for various securing operations in holding a patient in a wheelchair or upon a bed, as diagrammatically illustrated in FIGS. 3, 4 and 5 of the drawing.

Considering FIG. 6 of the drawing, here is a diagrammatic illustration showing initial stitching of the panel 18 to one of the side straps 23, including the showing of the hemmed edge 21 and also the pair of reinforced stitchings 37, which pass through not only the strap 34, but the strap 23 and the panel 18, thereby providing a strong reinforced attachment of the tie strap to the lower edge portion of the back panel. The same would apply to the other reinforced stitchings, as at 26 and 35. In all instances, the reinforced stitchings extend through the side straps 23 and the panels 10 and 18.

With my present simplified form of safety vest, a single tie strap is employed, in combination with the two pairs of loops at sides of the body portion of the vest.

Considering FIG. 2 of the drawing, in initial attachment of the vest to a patient, the vest is passed over the head of the patient, the head passing through the opening 11, after which, the ends 38 of the tie strap 34 are passed through the loops 31, preparatory to retaining a patient in a wheelchair or the like or upon a bed.

Turning now to the showing in FIG. 3 of the drawing, it will appear that, in retaining the patient against displacement from a wheelchair, the loops 25 are passed over the handgrips 39 of the chair 40, after which, the ends 38 of the strap 34 are tied at the back 41 of the chair, as seen at 42. It will, thus, be seen that a patient is held against leaning forward in the chair or slipping forward in a chair.

Turning now to the showing in FIG. 4 of the drawing, after assemblage of the vest, as shown in FIG. 4, the patient, when lying upon the bed 43, will be retained in the bed by extending the tie straps 38 downwardly over the sides of the bed and tying them to a rail 44, as seen at 45. With this construction, it will be apparent that the patient is free to rise in the bed or, in other words, to have the rear portion of the bed moved into an inclined position and, yet, at all times, the upper part of the patient is free and, by movement of the loops 31 along the tie straps 38, the patient can move from side to side and still be retained against displacement from the bed.

Considering FIG. 5 of the drawing, here it will appear that, after having established the tie, as at 45', the long strap end 38 is also passed through the loop 25 at the upper shoulder portion of the back panel and, then, tied to the rail 44', as seen at 46. This retains the upper part of the body of the patient against movement into a raised position, but still provides the turning of the patient from side to side as and when desired. It will be understood that, while only one side of the bed is shown in FIGS. 4 and 5 of the drawing, the other side of the bed will have attachments, similar to those shown in FIGS. 4 and 5.

While the head opening 11 has been described as in the upper portion of the front or vest panel 10, this opening is partially formed in the upper end portion of the back panel 18, keeping in mind the extended portions 22 of the back panel.

The supporting shield 36 is wide centrally of the front panel 10 and is contracted in the direction of the straps 23 at sides of the front panel, thus providing a widespread support of the shield and preventing what would otherwise be a belt-like binding or pressure upon the body of the wearer.

My improved safety vest does not employ any type or kind of buckles or other fasteners. Thus laundering of the vest is simplified.

As previously indicated, vests of the type and kind will be made in approximately three adult sizes and three or more children or infant sizes as, at all times, it is desirable to have the various panels of a proper fitting size upon the body of the wearer, as well as the length of the various straps employed, including the loop portions formed on the straps. It will further be apparent that the uses herein illustrated are only by way of showing some of the primary adaptations and uses of the safety vest, as these vests can be mounted in connection with various types and kinds of supports. With the structure, as shown in FIG. 3, the tying, as at 42, can take place at the front of the patient, after the straps have passed around the back 41 of the chair, particularly when it is desirable to have the patient care for removal of the vest in getting out of the chair, without the need of assistance from another person.

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

1. A safety device of the character defined, comprising front and back panels having reinforced side edges, a head opening formed between upper and lower portions of said front panel intermediate said reinforced edges, a cross-strap at the upper portion of the back panel terminating in loops projecting at sides of said panel, another cross-strap assemblage at the lower portion of the front panel, said assemblage comprising a pair of loops projecting at sides of the front panel and a supporting shield portion intermediate side edges of the front panel, a cross-strap at the lower edge of the back panel, and said last named cross-strap including tie straps projecting at sides of the back panel and adapted to engage side loops of the vest in securing an individual in connection with a support upon which the individual is arranged.

2. A vest as defined in claim 1, wherein said tie straps engage the pair of loops at the lower portion of the front panel, and the other pair of loops of the vest operatively engaging parts of the support upon which the individual is arranged.

3. A vest as defined in claim 1, wherein said tie straps engage the other pair of loops of the vest and the support upon which the individual is arranged in providing a secondary check of movement of the individual with respect to the support upon which the individual is arranged.

4. A vest as defined in claim 1, wherein the tie straps, at all times in the use of the vest, operatively engage the pair of loops projecting at sides of the lower portion of the front panel of the vest.

5. A vest as defined in claim 4, wherein said tie straps constitute a means for extending through the pair of loops projecting at upper sides of the back panel in providing a double check of movement of an individual in connection with a support.

6. A vest as defined in claim 4, wherein the loops projecting at upper sides of the back panel of the vest constituting a means for engaging handgrips of a wheelchair in support of the upper part of the body of an individual in engagement with a backrest of such chair.

7. A vest as defined in claim 1, wherein the cross-straps and cross-strap assemblage include reinforced stitchings at side portions of the vest.

8. A vest as defined in claim 7, wherein reinforcements at sides of the front and back panel comprise straps extending the full length of said panel sides, and said reinforced stitchings passing through said side straps.

9. A vest as defined in claim 1, wherein said cross-strap assemblage is fashioned from a single elongated strap, and said panels having hemmed side and end edges.

10. A vest as defined in claim 1, wherein said shield portion is generally diamond-shaped in contour comprising a wide portion centrally of the front panel and contracted ends extending to side edges of the front panel.

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SAMUEL KOREN, *Primary Examiner.*

ALDRICH F. MEDBERY, *Examiner.*