

[54] STEAM PACK COVER AND SNAP
FASTENING DEVICES THEREFOR

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[51] Int. Cl. A61f 7/00

[58] **Field of Search**..... 128/254, 258, 403;
150/52 R, 2.1

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[57] **ABSTRACT**

A fabric cover for a steam pack used as a compress to apply localized moist heat to the human body includes a sheet of flexible material adapted to at least partially enclose the steam pack and having a plurality of snap fastening devices arranged to enable either side of the sheet to be folded over and fastened together at its

marginal edges to cover the pack, or alternatively to cooperate with a similar cover to enclose a larger size pack therebetween where either side of one cover may be fastened along its marginal edges to either side of the other cover. A first pair of the snap fastening devices are arranged at the marginal edges of the sheet and have male members extending from one face of the sheet and having female members axially-aligned with and connected through the sheet to the male members extending from the opposite face of the sheet. A second pair of snap fastening devices arranged at marginal edges of the sheet have male members extending from the same side of the sheet as the foregoingmentioned female members for snapping into engagement therewith and have female members extending from the opposite side of the sheet in axial alignment with and connected through the sheet to the last-mentioned male members to snap into engagement with the first-mentioned male members, whereby the cover is reversible to eliminate unwanted time-consuming manipulations of the cover when enclosing a heated steam pack. Each snap fastening device includes a male member having a stem and a base flange adapted to engage one face of the fabric material, and a retaining ring having a plurality of axially-extending depending prongs adapted to surround the stem of the male member with the prongs extending through holes in the base flange and through the fabric material for being retained in an in-turned annular flange at the back side of a female member.

7 Claims, 8 Drawing Figures

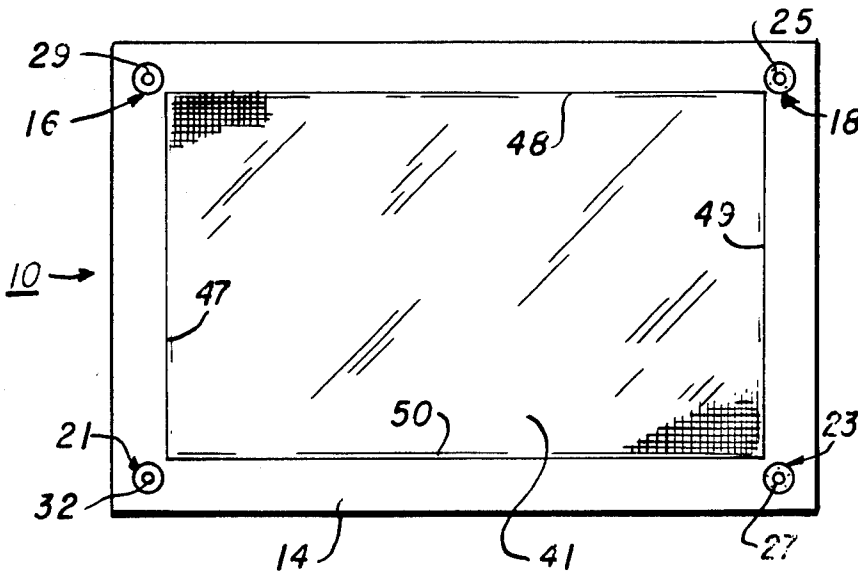


FIG. 5

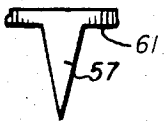


FIG. 4

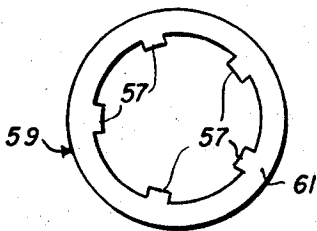


FIG. 6

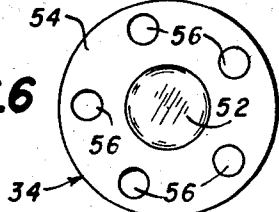


FIG. 7

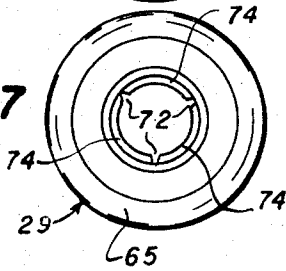


FIG. 1

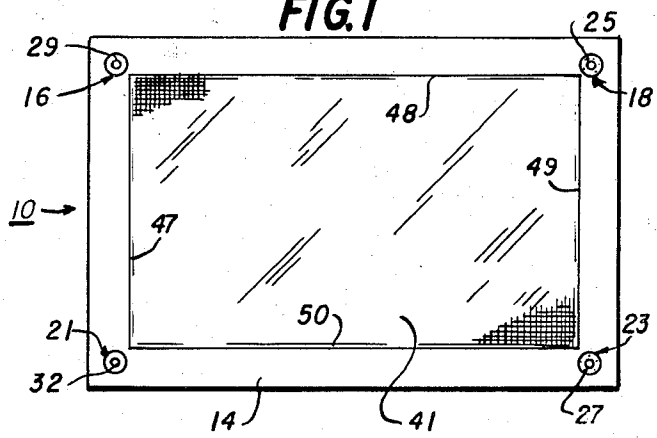


FIG. 2

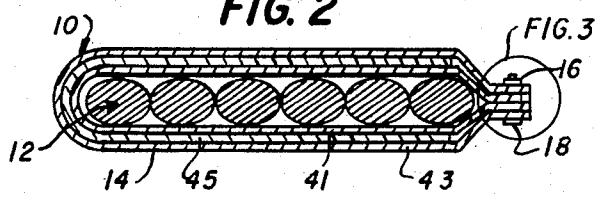


FIG. 8

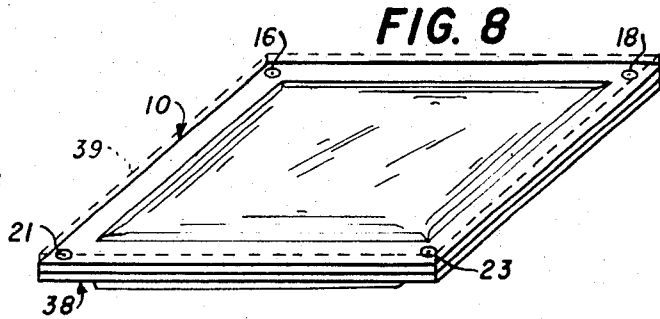
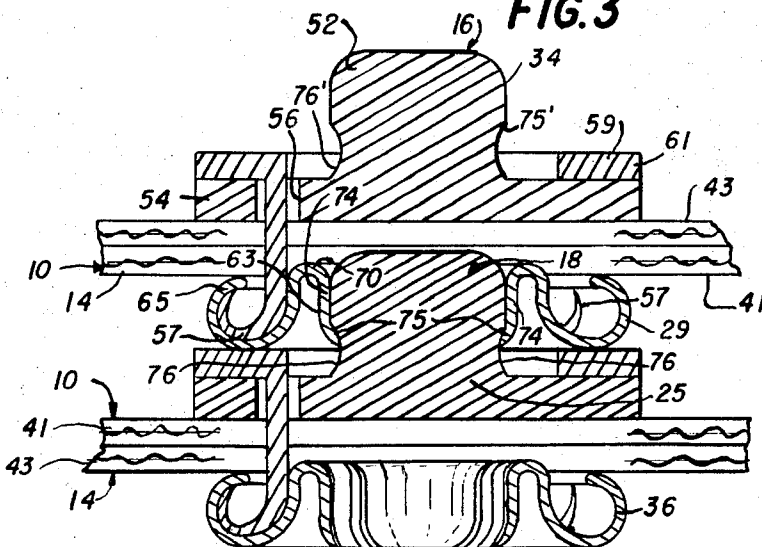


FIG. 3



STEAM PACK COVER AND SNAP FASTENING DEVICES THEREFOR

The present invention relates to a steam pack cover and snap fastening devices therefor, and it more particularly relates to a fabric cover for a steam pack used as a compress for applying localized moist heat to the human body and combination male and female snap fastening devices for the cover to enable it to be used conveniently and efficiently in various different manners.

Steam packs for use as compresses have been enclosed in covers composed of fabric material to provide sufficient spacing from the surface of the body to be treated and to permit the moist heat to be applied thereto. The covers comprise a rectangular-shaped sheet of fabric material adapted to be folded over transversely to enclose the steam pack therewithin, and includes fastening devices, such as snap fastening devices arranged at the marginal edges of the sheet to fasten them together. In order to utilize the same cover to enclose a larger size steam pack, the larger pack has been placed on the cover and then a similar cover is placed over the pack so that the marginal edges of the two covers are fastened together. However, such a cover has not been entirely satisfactory for some applications in that the covers have not been adaptable for efficiently and conveniently enclosing the steam packs. It is oftentimes desirable to enclose the heated steam pack as soon as possible after removing it from a hot water bath so that the pack does not cool, and due to the construction of the covers they cannot be readily arranged in a very efficient manner for such an operation. In this regard, when the large size steam pack is used, the second cover must be properly disposed before placing it over the steam pack and fastening it to the other cover, and such an operation is not entirely efficient since the face of the cover bearing the fastening devices must first be arranged and positioned facing the steam pack before the fastening devices can be attached together. In order to help facilitate such an operation, the user oftentimes has a stack of fresh covers available for enclosing both smaller size packs or larger size packs when needed, but the covers must be first arranged in the stack with the face of the covers bearing the fastening devices facing the same direction and such a stacking operation requires an undue and unwanted amount of time for preparation purposes. Therefore, it would be highly desirable to have a steam pack cover which not only is adapted to entirely enclose a small size steam pack, but also is adapted to cooperate with a similar cover to enclose a large size steam pack in a quick and highly efficient manner without the necessity of extraneous manipulations or preparations of the covers. In this same regard, it would be highly desirable to have a steam pack cover which need not require any special orientation so that there is no need for determining and then positioning one particular face of the cover during a covering operation. Moreover, it would be advantageous to have such a cover which would be readily attachable to a plurality of other similar covers where additional spacing is required when sensitive body surfaces are to be treated. Also, it would be highly desirable to have a snap fastening device which is a combination male and female device and which is readily and efficiently assembled to the cover.

Therefore, the principal object of the present invention is to provide a new and improved steam pack cover, which is readily and efficiently adaptable to enclose a steam pack without the necessity of time-consuming extraneous manipulations, and which is adapted to be readily attached to a number of additional similar covers where additional spacing is required when sensitive body surfaces are to be treated.

Another object of the present invention is to provide a new and improved combination male and female snap fastening device, which is readily attachable to fabric material in a convenient and efficient manner.

Briefly, the above and further objects of the present invention are realized by providing a steam pack cover, which includes a sheet of flexible material adapted to at least partially enclose a steam pack and having a plurality of snap fastening devices, which are combination male and female devices. A first pair of the devices are arranged at marginal edges of the sheet and have male members extending from one side of the sheet and female members axially-aligned with and connected through the sheet to the male members and extending from the opposite side of the sheet. A second pair of snap fastening devices arranged at the marginal edges of the sheet have male members extending from the side of the sheet on which the female members of the first pair of devices are connected for snapping into engagement therewith and have female members extending from the opposite side of the sheet in axial alignment with and connected through the sheet to the last-mentioned male members and adapted to snap into engagement with the male members of the first pair of devices. As a result, the cover of the present invention is reversible in that when a pair of similar such covers are employed to enclose a large-size steam pack, either side of one of the covers may be fastened to either side of the cover, whereby time-consuming extraneous manipulations are eliminated so that the heated steam pack may be quickly and efficiently enclosed within the covers. Also, in accordance with the present invention, a single cover may be employed to enclose a small-size steam pack, and the inventive covers may be arranged in a stack without the need for positioning them in the same direction. Moreover, in order to provide greater insulation and spacing when tender areas of the body are to be treated, additional layers may be provided by securing additional similar covers to the completed package by attaching them with the combination male and female devices since each one of the covers is reversible.

The snap fastening device of the present invention includes a male member having a stem and a base flange adapted to engage the fabric material, and a retaining ring having a plurality of axially-extending depending prongs adapted to surround the stem of the male member with the prongs extending through the holes in the base flange thereof and through the fabric material into engagement with an inwardly-bent annular flange at the back side of a female member engaging the opposite side of the fabric material to retain the distal end portions of the prongs in place.

The invention, both as to its organization and method of operation, together with further objects and advantages thereof, will best be understood by reference to the accompanying detailed description taken in connection with the accompanying sheet of drawings, wherein:

FIG. 1 is a plan view of a steam pack cover constructed in accordance with the present invention;

FIG. 2 is an enlarged, cross-sectional view of the cover of FIG. 1 showing it enclosing a steam pack;

FIG. 3 is a greatly enlarged detail view of the circled portion of FIG. 2 showing a pair of interlocked snap fastening devices constructed in accordance with the present invention;

FIG. 4 is a reduced-scale rear plan view of the retaining ring of one of the snap fastening devices of FIG. 3;

FIG. 5 is an enlarged fragmentary face view of one of the prongs of the retaining ring of FIG. 4;

FIG. 6 is a reduced-scale front plan view of the male member of one of the snap fastening devices of FIG. 3;

FIG. 7 is a reduced-scale rear plan view of the female member of the snap fastening devices of FIG. 3; and

FIG. 8 is a reduced-scale isometric view of the cover of FIG. 1 and a similar cover enclosing a larger-size steam pack, a third similar cover being illustrated in broken lines to show how an additional cover may be used to provide a greater spacing of a steam pack from the body surface.

Referring now to the drawings, and more particularly to FIGS. 1, 2 and 3 thereof, there is shown a steam pack cover 10, which is constructed in accordance with the present invention, and which when folded over transversely and fastened together as shown in FIG. 2 is adapted to enclose a steam pack 12. The cover 10 generally includes a rectangular sheet 14 composed of fabric material having snap fastening devices 16, 18, 21 and 23 secured to the marginal edges of the sheet 14 at the four corners thereof. The snap fastening devices are combination male and female devices, and in this regard the devices 18 and 23 have respective male members 25 and 27 extending from the face of the sheet 14 shown in FIG. 1 and arranged to snap into engagement with the respective female members 29 and 32 of the respective devices 16 and 21 when the sheet 14 is folded over transversely to enclose the steam pack 12. Each one of the fastening devices is similar to one another, and as shown in FIG. 3, the device 16 has a male member 34 extending from the back face of the sheet 14 and is connected through the sheet 14 to the female member 29 in axial alignment therewith. Similarly, the device 18 includes a female member 36 connected through the sheet 14 at the back face thereof to the male member 25. Consequently, in accordance with the present invention, the cover 10 is reversible and thus the steam pack 12 may be placed on either the front or the rear face of the sheet 14 and then the sheet 14 may be closed thereabout and fastened together. Therefore, no extraneous manipulations are required to insure that the steam pack 12 is placed on a given face of the sheet 14. Also, the cover 10 and a plurality of similar such covers may be arranged in a stack for preparation purposes without the need for having them all face in the same direction. Moreover, as shown in FIG. 8, if desired the cover 10 may be employed with a similar cover 38 to enclose a larger size steam pack (not shown) in a convenient and efficient manner. In this regard, either the front or rear face of the cover 10 may be fastened to either the front or rear face of the cover 38, and thus no special preparation or extraneous manipulations are required to align the faces of the covers so that the heated steam pack may be quickly enclosed by the covers without an unwanted or undue delay in time. Moreover, a third cover 39 shown in bro-

ken lines in FIG. 8 may be attached in overlying relation to the cover 10 by connecting its fastening devices on the outer face thereof to the fastening devices of the cover 39 to provide additional spacing between the enclosed steam pack and the body surface to be treated, and in like manner any desired number of similar covers may be attached for spacing purposes.

Considering now the cover 10 in greater detail, as shown in FIG. 2 the sheet 14 comprises a front sheet 41 sewn along its marginal edges to a rear sheet 43 with at least one inner sheet 45 disposed between the sheets 41 and 43 to provide an added protection to help insulate the steam pack 12 from the surface of the body being treated. The inner sheet 45 is somewhat smaller than the outer sheets 41 and 43, and the front and rear sheets 41 and 43 are sewn together along the lines 47, 48, 49 and 50 to confine the smaller inner sheet 45 therewithin. It should be understood that a plurality of inner sheets may be provided, if desired, to provide greater insulation and to give the cover 10 greater bulk. Each one of the sheets forming the cover 10 is rectangular in shape and is composed of a flexible fabric material, such as terry cloth material. The cover 10 is adapted to cover conventional steam packs, such as the steam pack sold under the trademark "HYDROCOL-LATOR" sold by Chattanooga Pharmaceutical Company of Chattanooga, Tenn.

Considering now the snap fastening devices in greater detail with reference to FIGS. 3, 4, 5, 6 and 7 of the drawings, only the snap fastening device 16 will now be considered in detail since each one of the snap fastening devices is similar to one another. The male member 34 of the device 16 includes an upstanding stem 52 having an external circular base flange 54 adapted to engage the back face of the sheet 14 and having a series of equally-spaced holes 56 extending therethrough to receive a series of prongs 57 depending from a retaining ring 59, which fits over and surrounds the stem 52 and engages the flange 54 in overlying relationship therewith to retain the male member 16 on the rear face of the sheet 14 with the distal end portions of the prongs 57 being retained by the female member 29 on the opposite front face of the sheet 14 as hereinafter described in greater detail. The retaining ring 59 includes an annular plate 61 having the equally-spaced prongs 57 integrally connected thereto and depending therefrom. The prongs extend from the annular plate 61 in a direction parallel to and spaced from the axis of the plate 61 and are adapted to be aligned with the corresponding holes 56 in the base flange 54.

The female member 29 of the snap fastening device 16 is adapted to snap into engagement with the male member 25 of the device 18 or a similar male device of another cover, such as the cover 38 (FIG. 8). The female member 29 includes a resilient tubular retainer 63 for snapping into engagement with the stem 25 of the device 18, and an in-turned annular flange 65 at the back side thereof for engaging the back face of the sheet 14 to receive and retain the prongs 57 of the retaining ring 59 to secure both the male member 34 and the female member 29 of the sheet 14.

In order to attach the snap fastening device 16 to the sheet 14, the female member 29 is held against the front face of the sheet 14 at the corner portion thereof as shown in FIG. 1 by means of a tool (not shown), and then the male member 34 is placed with its flange 54 on the opposite rear face of the sheet 14 in axial align-

ment with the female member 29. Thereafter, the retaining ring 59 is slipped over the stem 52, and the prongs 57 are guided through the holes 56 and then forced through the fabric sheet 14 to sever it, whereby the prongs extend through slits in the sheet 14 into engagement with the female member 29. A simple tool (not shown), is then used to force the retaining ring 59 toward the base flange 54 by striking the tool with another tool, such as a hammer, so that the distal end portions of the prongs 57 bend outwardly into a hook-like configuration as guided by the internal contour of the in-turned flange 65 until the annular plate 61 engages the base flange 54, whereby the prongs 57 are secured within the in-turned flange 65 to retain the male member 34 and the female member 29 in axial alignment to the sheet 14.

The tubular retaining member 63 is centrally disposed and integrally connected to the in-turned flange 64 at a reversely-bent intermediate portion 70 at the rear side of the female member 29. The retaining member 63 is open at both of its ends to receive a stem portion of a male member therewithin and includes a series of three V-shaped axially-extending slits 72 to define three equally-spaced spring fingers or blades 74 to grip resiliently a male member of a snap fastening device. The distal-end portions of the spring fingers 74 are inwardly bent to snap into engagement with an annular shoulder 75 of a recess 76 of the stem of the male member 25. It should be understood that the stem 34 of the snap fastening device 16 has a similar shoulder 75' of a similar recess 76'. When the male member 35 is snapped into engagement with the female member 29, the stem of the male member 25 is inserted into the retaining member 63 to cause the spring fingers 74 to flex radially outwardly to receive the stem until the recess 76 is positioned opposite the distal end portions of the spring fingers 74, which then snap into engagement with the recess 76 and are retained by the shoulder 75. In accordance with the present invention, the shoulder 75 is spaced from the annular base flange of the male member by a distance greater than the thickness of the annular plate 61 so that the spring fingers 74 engage the recess 76 at the shoulder 75 above the retaining ring for the male member being snapped into engagement therewith, the movement of the male member into the retaining member 63 being limited by the in-turned flange 65 which engages the retaining ring of the male member being inserted.

While the present invention has been described in connection with a particular embodiment thereof, it will be understood that many changes and modifications of this invention may be made by those skilled in the art without departing from the true spirit and scope thereof. Accordingly, the appended claims are intended to cover all such changes and modifications as fall within the true spirit and scope of the present invention.

What is claimed is:

1. A cover for a steam pack, comprising:
a sheet of flexible material adapted to at least partially enclose the steam pack and having a plurality of snap fastening devices,

first and second ones of said devices being arranged at marginal edges of said sheet, each one of said first and second devices having a male member extending from one face of said sheet and having a female member axially aligned with and connected through said sheet to said male member and extending from the opposite face of said sheet; and third and fourth ones of said devices being arranged at marginal edges of said sheet, each one of said third and fourth devices having a male member extending from said opposite face of said sheet and adapted to snap into engagement with one of said female members of said first and second devices and having a female member extending from said one face of said sheet in axial alignment with and connected through said sheet to the last-mentioned male member and adapted to snap into engagement with one of said male members of said first and second devices.

2. A cover according to claim 1, wherein each one of said snap fastening devices includes a male member having a stem and a base flange engaging said sheet and having a plurality of holes extending through said flange, a retaining ring having a plurality of depending prongs surrounding said stem with said prongs extending through said holes and through aligned holes in said sheet, a female member having a male-member receiving receptacle on one side thereof and having an inwardly-turned annular flange on its other side thereof for engaging the sheet and for receiving and retaining the distal end portions of said prongs.

3. A cover according to claim 2, wherein each one of the stems of the male members having an external annular recess disposed adjacent said annular member, each one of the receptacles of said female members being in the form of a tubular member having a plurality of resilient in-turned fingers for gripping one of said stems in its recess.

4. A cover according to claim 3, wherein each one of said retaining rings includes an annular member, said prongs extending from said annular member in a direction parallel to the axis of said annular member and being spaced from said axis.

5. A cover according to claim 4, wherein each one of said prongs has a sharp-pointed distal end portion for piercing said sheet.

6. A cover according to claim 5, wherein said sheet is generally rectangular in shape and has four corner portions, said devices being arranged at said corner portions.

7. A cover according to claim 6, wherein said sheet is composed of fabric material.

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