United States Patent

Beaudoin

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[54] PACKAGED SURGICAL PAD HAVING PROTECTED WOUND-CONTACTING SURFACE AND METHOD OF PACKAGING SAME

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[52] **U.S. Cl.** .....**206/63.2 R,** 53/33, 206/46 ST, 206/56 AA

[51] **Int. Cl.** **A61b 15/00**

[58] **Field of Search** .....53/21, 33; 206/46 ST, 56 A, 206/56 AA, 57 R, 63.2 R, DIG. 17; 15/104.93, 104.94; 401/132, 133

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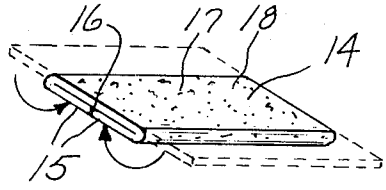
[57] **ABSTRACT**

A surgical pad, which comprises a filler of cotton or the like in a covering of non-woven material, has edge portions folded downwardly and inwardly under the pad over its bottom wound-contacting face to meet on the longitudinal center line therebeneath, and is wrapped in a tubular wrapper having a peel-away top closure. When the closure is peeled away it exposes a top surface of the pad which may be grasped to lift the pad upwardly out of the package, the folded portions having an inherent tendency to thereafter straighten out into the plane of the top portion of the pad. The method of packaging the surgical pad is also disclosed.

8 Claims, 8 Drawing Figures



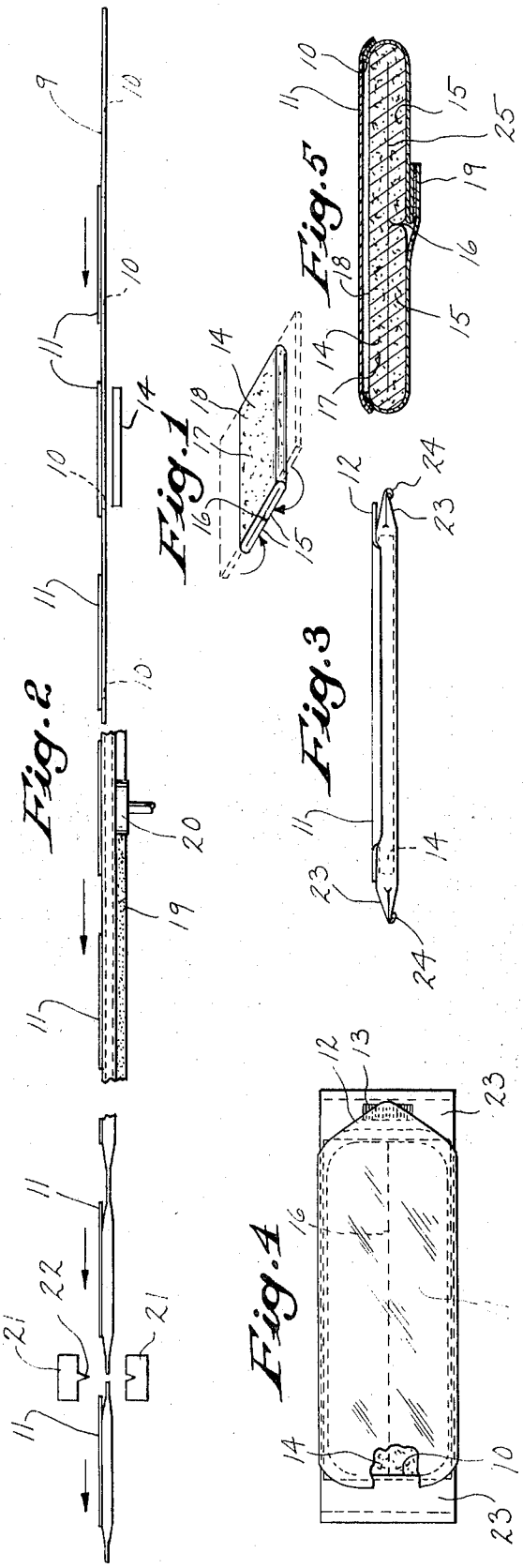


Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

Fig. 8

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PACKAGED SURGICAL PAD HAVING PROTECTED WOUND-CONTACTING SURFACE AND METHOD OF PACKAGING SAME

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention pertains to the art of folding and wrapping surgical pads such as relatively large surgical pads commonly termed abdominal pads.

2. Description of the Prior Art

Heretofore surgical pads such as abdominal pads have been wrapped in suitable packaging material of the type which allows for steam sterilization of the package after it has been sealed. In packages as heretofore proposed it has been difficult to remove the pad from a package in a simple and quick manner while maintaining the sterility of that face of the pad which must be applied to the wound. Furthermore, pads as heretofore folded and packaged have been cumbersome to handle after removal from the packages, and difficulties have been encountered in getting them to open out in proper form for application to the wound.

SUMMARY OF THE INVENTION

The present invention provides an improved surgical package and method of wrapping pads whereby the pad may be quickly removed from the package and caused to automatically open out to proper condition for immediate use while the sterility of that face of the pad which is to contact the wound is maintained.

A further object of the invention is to provide a wrapped surgical pad wherein the pad has opposite edge portions folded downwardly and inwardly underneath the pad to meet at the longitudinal center line of the pad and package and thereby provide a two-layer wrapped product, the package having an elongated die cut opening which extends in the same direction as the parting line of the meeting edges of the pad. Thus when the top surface of the pad is exposed, after the closure has been peeled back, the pad may be quickly removed from the package by grasping of the top surface only, the pad automatically opening out to a suitable condition for immediate use.

Other objects of the invention are to provide a method of wrapping surgical pads which is simple and foolproof and which may be carried out by continuous wrapping procedures utilizing a continuous web of material; which provides a package that is neat in appearance; which provides a package which can be speedily opened; and which provides a package which allows thorough steam sterilization after packaging.

BRIEF DESCRIPTION OF THE DRAWING

In the accompanying drawing, illustrating one complete embodiment of the preferred form of the invention, in which the same reference numerals designate the same parts in all of the views:

FIG. 1 is a perspective view of a folded pad, the broken lines showing how it is folded prior to being wrapped;

FIG. 2 is a broken side view showing the continuous method of wrapping the pads;

FIG. 3 is an edge view of one of the completed packages;

FIG. 4 is a top view of the package;

FIG. 5 is an enlarged transverse sectional view through the wrapped package;

FIG. 6 is a perspective view showing the first step in removal of the pad for use;

FIG. 7 is a perspective view showing a second step in the removal of the pad; and

FIG. 8 is a view showing the final step in the handling of the pad after removal from the package, the broken lines indicating various positions of the folded portions of the pad.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring more particularly to the drawing, first to FIG. 2, the packaging material is formed by die cutting openings 10 in the web of material 9 at longitudinally spaced intervals. The web is preferably formed of steam-permeable material such as bleached sulphite paper. Closure members 11 each of a size to cover an opening are bonded over the openings by a heat-sealing method, or by any other suitable means. Where the main material of the web 9 is formed of steam-permeable material such as bleached sulphite paper it is preferred to form the closures 11 of transparent film material such as polyethylene. Each closure will have a loose pull tab portion 12 projecting from one end which is not bonded to the package, and suitably attached to the pull tab it is preferred to have a colored marking strip 13, as illustrated in FIG. 4. In lieu of the separate colored piece 13 the tab itself may be colored.

In carrying out the wrapping method in connection with a relatively large surgical pad, such as an abdominal pad, the longitudinal edge portions 15 of the abdominal pad 14 (see FIG. 1) are folded downwardly and inwardly from the broken line position of FIG. 1 beneath the pad to the full line position shown in FIG. 1, with the edges meeting along the line 16 midway of the width of the pad, which line of meeting extends longitudinally of the pad and ultimate package.

The pad 14 is best shown in FIG. 5 and it comprises a relatively thick filler 17 of cotton, cellulose fluff, or other highly-absorbent material, with an outer covering 18 of suitable non-woven material which has sufficient strength to retain the cotton filler, and which has a relatively smooth surface so that the folded layers do not tend to cling to each other in the folded condition of FIG. 5. The pads 14, with the relatively thick filling of cotton, are of such nature that when relatively narrow edge portions are folded toward one another underneath the pad these portions have an inherent tendency to want to straighten out into the plane of the main portion of the pad. By having the folded portions relatively long and narrow, as shown in FIG. 4, they increase the inherent tendency to open out.

During progress through the wrapping operation of FIG. 2 the pads, folded to the full line condition of FIG. 1, are suitably retained in the folded condition and are fed into wrapping position, one after another, as shown in FIG. 2, with the line 16 of the meeting edges extending longitudinally of the direction of movement of the web. The web 9 is continuously conveyed toward the left as indicated in FIG. 2, and is wrapped around the folded pads 14 in a suitable manner, which may be by a continuous process of the type disclosed IN Campbell U.S. Pat. No. 2,882,662. In such wrapping the edges of the web are brought together beneath the package in the form of fins, as at 19, to entube the merchandise. These fins are then continuously sealed together by any suitable method, such as by heat sealing rollers 20, and are then folded upwardly into parallelism with the bottom of the package. Thereafter pressure sealing members 21, having a cutting knife 22, are brought together to bring about transverse seals in the zones between pads and to simultaneously sever the web intermediate the width of the zones, as shown at the left hand side of FIG. 2.

It is to be noted that the openings 10 and closures 11 are so spaced that the transverse sealing at 23 can be performed in the spaces between the ends of adjacent openings 10 without contacting the closures. Thus the closures 11 are maintained independent of the transverse end seals. The resulting package is shown in FIGS. 3 and 4. Here the longitudinal seal 19 joins the end seals, and there may be drug folds 24 at the ends. It is to be noted that the fin seals 19 are beneath and extend longitudinally in the same direction as the line of meeting 16 of the underfolded edges of the pad.

After the packages have been formed they are subjected to steam sterilization, the steam permeating the white sulphite material forming the major portion of the package, and permeating the interior to provide sterilization of the pad.

When it is desired to use the package, the colored marker **13** on the pull tab permits the user to readily distinguish the pull tab end. The pad is then gripped between the thumb and forefinger of the left hand as in FIG. **6**, the pull tab **12** is grasped with the right hand, and the closure **11** is peeled off in the manner shown in FIG. **6**. The opening **10** in the package (FIG. **7**) is nearly as long as the folded abdominal pad and is nearly as wide as the package. This permits the nurse or surgeon to grasp, with the right hand, the top face of the pad through the exposed opening, as shown in FIG. **7**. The pad is then pulled quickly from the package and, due to the size of the opening with respect to the size of the pad, this is readily accomplished. Due to the method of prefolding the pad as shown in FIGS. **1** and **5**, and due to the inherent tendency of the folded portions of the pad to straighten out toward the broken line position of FIG. **1**, as the pad is pulled from the package these two folded portions **15** quickly open out and pass through positions (a) and (b) of FIG. **8** to the final position (c) which is close to the original plane of the pad. This tendency is insured because of the fact that the outer covering **18** of the pad is of a material which does not cling to itself. Therefore, there is no tendency for the folded-in portions **15** to remain folded in after the pad is removed from the package. The opening out of the pad to position (c) may be accelerated by a forward motion of the right hand. All of this is accomplished without touching the undersurface or wound-contacting surface **25** of the pad, the latter remaining in a perfectly sterile condition and in a position where it can be readily applied to the wound while grasped as in FIG. **8**. It is to be noted that the wound-contacting face **25** of the pad is kept covered by the folded-in portions until the pad is removed from the package.

It is to be understood that I do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

What I claim is:

1. A combination wrapper and surgical pad, said wrapper being of the type having a longitudinally extending top opening of less length than the surgical pad but occupying a major portion of the area of the top of the wrapper with a closure sealably bonded thereover, an elongated surgical pad being within the wrapper, said pad being longer than said top opening so that its ends are protected after the closure is pealed away and said pad having a bottom wound-contacting face and having a continuous top face portion beneath said opening and having edge portions folded inwardly toward one another beneath the pad and over its bottom wound-contacting face to provide a two-ply thickness of the pad within the wrapper, the inwardly folded portions of the pad being in contact with the bottom of the wrapper and having an inherent tendency to straighten out into the plane of the pad after the pad has been grasped by a top surface portion and lifted out of the wrapper following pealing away of the closure, the ends of the wrapper being sealed along transverse lines which are beyond the ends of the top opening and its closure whereby the ends of the pad are in protected position within the wrapper until the pad has been lifted out.

2. A combination as claimed in claim **1** in which the wrapper is in the form of an elongated tube having end seals, and in which the edge portions which are folded beneath the pad extend longitudinally of the tubular wrapper.

3. A combination as claimed in claim **1** in which the edge portions which are folded toward one another beneath the pad meet on a longitudinal center line of the wrapper.

4. A combination as claimed in claim **1** in which the inwardly folded edge portions of the pad are relatively long and narrow to increase their inherent tendency to open out when removed from the wrapper.

5. A combination as claimed in claim **1** in which the pad includes a covering of material which is nonclinging to itself whereby there is no interference with the tendency of the inwardly folded portions to open out.

6. A method of wrapping an elongated surgical pad of the type having a top face and having a bottom wound-contacting face comprising: preparing a wrapper of a length and width to cover the pad and with a longitudinally extending access opening in a portion which is to form the top face of the wrapping, with the opening of less length than the pad but of a size to occupy a major portion of the area of the top of the wrapper, pealably bonding an exteriorly accessible closure over said opening, folding edge portions of the pad, which have an inherent tendency to straighten out, downwardly and inwardly toward one another beneath the pad and over its wound-contacting face to provide a two-ply thickness of the pad in the wrapper, wrapping the pad in the wrapping material with the access opening extending longitudinally over the top face of the pad and with the ends of the access opening positioned to terminate short of the ends of the pad while maintaining the folded portions of the pad in folded condition against their tendency to open out and with the position of the pad relative to the access opening such that the wrapper protects the ends of the pad until after it has been lifted out of the access opening, and transversely sealing the ends of the wrapper along transverse lines which are beyond the ends of the access opening and its closure.

7. A method as set forth in claim **6** in which the edge portions which are folded downwardly and inwardly are sufficiently narrow to increase their inherent tendency to open out when removed from the wrapper.

8. A method as set forth in claim **6** in which the edge portions are folded so that their edges meet on a longitudinal center line beneath the pad to thus protect the wound-contacting face of the pad.

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