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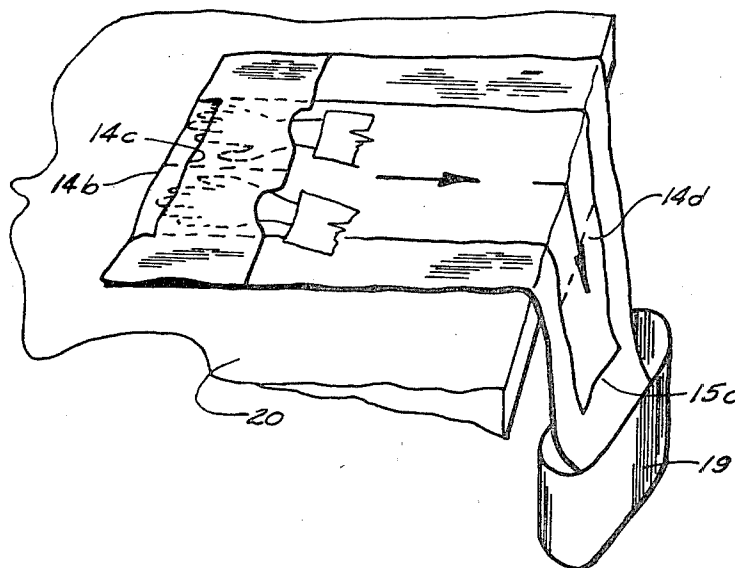
[54] **UNDERBUTTOCKS DRAPE**
6 Claims, 4 Drawing Figs.

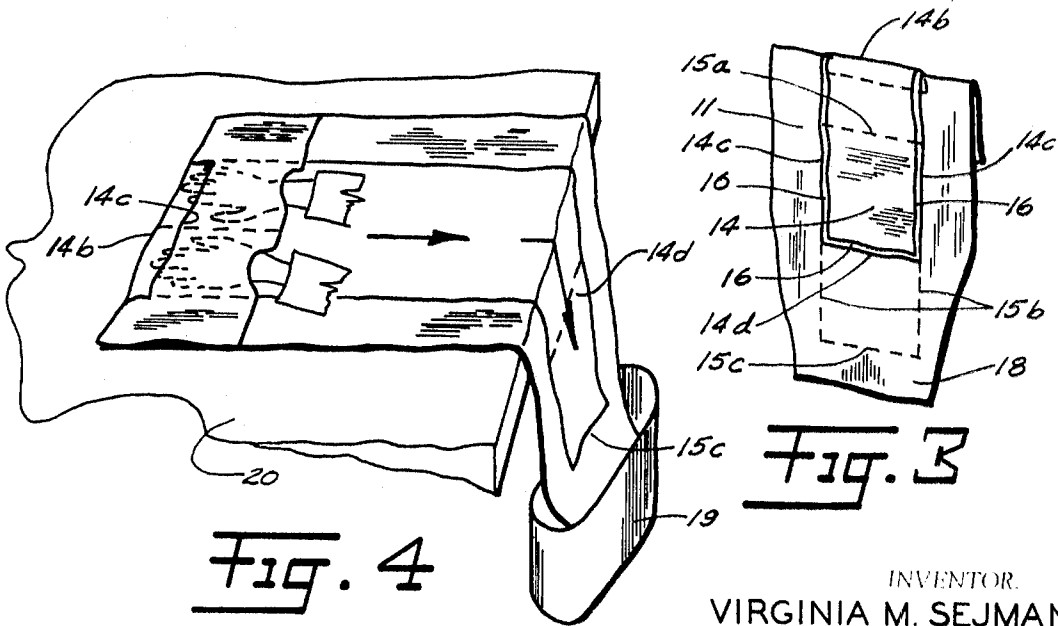
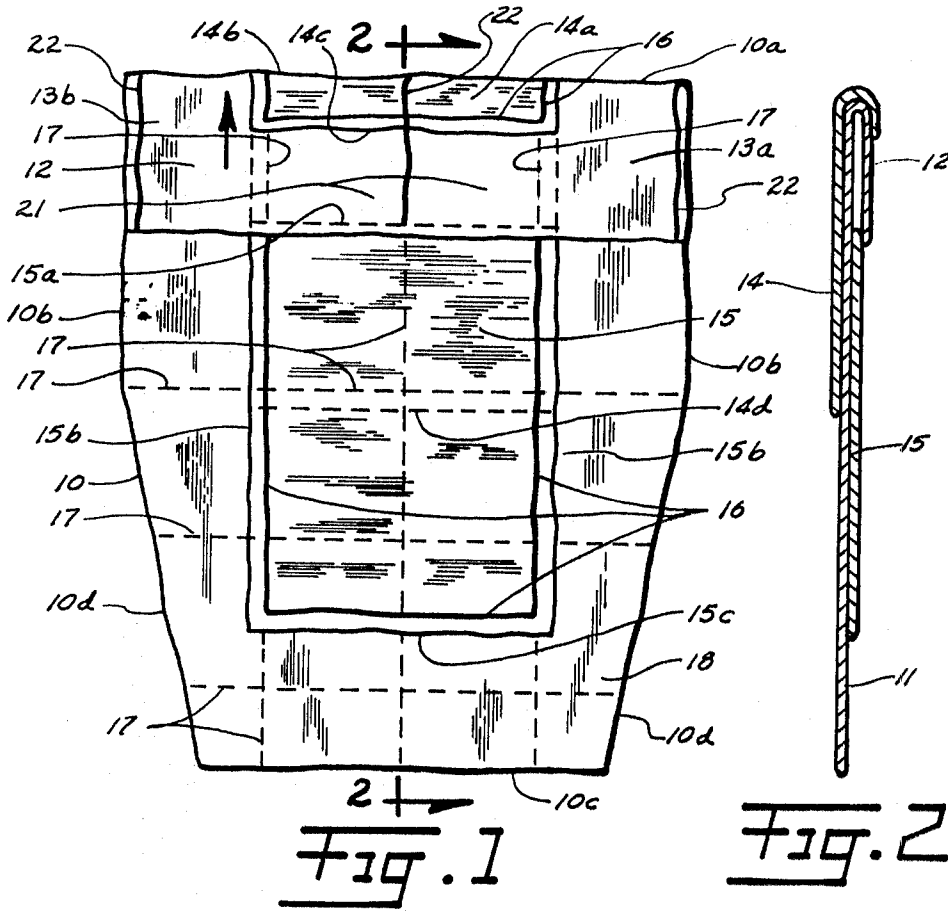
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ABSTRACT: An underbuttocks drape is provided having a main panel laminated with or adhered to an overlying fluid-impervious drain panel on one surface and a fluid-impervious slide panel on the reverse surface. The slide panel extends from the back surface around the top edge or leading edge of the main panel and reinforces the leading edge adjacent a hand-receiving cuff so that the assembled drape can be manipulated and slid under the patient supported on an operating table.

The slide panel and drain panel serve to stabilize and reinforce the main panel as the drape is being placed into position. The drain panel is adapted to be extended to and hung over the edge of the table into a fluid-receiving container.





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UNDERBUTTOCKS DRAPE

SUMMARY AND DETAILED DESCRIPTION

The invention relates to improved surgical drapes for obstetrical purposes, lithotomies and similar operations. More particularly, the invention relates to disposable surgical drapes of an improved type adapted to facilitate placement under the patient on the operating table and to minimize drainage problems and cleanup.

Prior to the present invention, disposable surgical drapes have been provided having a fluid-repellent, nonwoven fibrous main panel, in some cases laminated with a reinforcing plastic film panel. These prior art drapes, however, have been subject to structural failures during manipulation and positioning, or have failed to provide adequate drainage, etc.

The present invention, therefore, has the object of providing an improved type of surgical drape for the operating table, obstetrical purposes and the like which can be packaged in compact, folded form and can be opened, unfolded and placed into operating position aseptically, i.e. without contaminating critical sites.

Another object of the invention is to provide an article of the kind described which is extensively reinforced structurally to minimize tearing, strike-through, etc.

A further object of the invention is to provide an underbuttocks drape which can be positioned on the operating table in a manner facilitating complete drainage from the operating site with minimum hindrance to the physician and nurses, simplifying cleanup, etc.

These and other objects, advantages and purposes of the invention will be seen from the following description and the accompanying drawing in which:

FIG. 1 is a plan view of a preferred surgical drape of the invention in unfolded form;

FIG. 2 is a cross section of a surgical drape taken on line 2-2 of FIG. 1;

FIG. 3 is a view of the reverse side of the drape shown in FIG. 1; and

FIG. 4 is a perspective view of a surgical drape of the invention being positioned on the operating table.

Referring to FIG. 1, an obstetrical or lithotomy drape 10 is shown having a top edge 10a, side edges 10b, a trailing edge 10c and slanted edges 10d. In another design, the edges 10d can instead be straight continuations of the side edges 10b. The drape includes a main panel 11 having a cuff 12 separated into right and left cuff portions 13a and 13b, sealed along seal lines 22. Affixed to the rear side of the main panel 11 on seal lines 16 is a fluid-impervious slide panel 14 extending to the top edge 10a and brought around to the front of the panel in the form of a lapel 14a having a top edge 14c on one margin and a leading edge 14b coinciding with the top edge 10a of the main panel 11. The slide panel 14 has a trailing edge 14d on the rear side and is affixed to the front of the main panel 11 by suitable means along seal lines 16.

Also affixed to the face of the main panel is a fluid-impervious drain panel 15 having a leading edge 15a, sides 15b and a trailing edge 15c. The drain panel 15 and main panel 11 are sealed together along seal lines 16. The arrangement is such that the slide panel 14 overlaps the drain panel 15. In other words, the leading edge 15a of the drain panel lies above the trailing edge 15c of the slide panel 14. The two panels are joined together with the main panel by the seal lines 16 along the side edges so that the panels in this fashion constitute a unitary structure which is resistant to tearing under the conditions usually encountered during surgical operations. In other words, the combination of the main panel bonded together with the slide panel and drain panel by the seal lines provides a tear-resistant unit which can be manually directed or advanced towards the patient in the direction shown by the arrow of FIG. 1 without tearing or rupturing the main panel.

To use the preferred form of the drape as described, the same is unfolded from a compact form indicated by the fold

lines 17 to the open form shown in FIG. 1. The right and left hands are then inserted in the right and left cuffs 13a and 13b in the position shown in FIG. 4 and the drape positioned on the table with the trailing edge of the drain panel hanging down from the edge of the operating table. The leading edge 14b is then brought forward towards the patient and advanced or slid firmly under the patient to the point where the patient is seated on the contact zone 21. In this zone, being part of the cuff 12, the surface advantageously has a soft finish which affords greater comfort as opposed to the generally harder finished panels 14 and 15. On the other hand, however, the reverse side of the drape which bears the downward force of the advancing movement has, according to the invention, a smooth slidable surface which by comparison involves a much lower frictional restraint to sliding than the surface of the main panel, particularly in the presence of moisture. In advancing the leading edge, the fingers contact the inner surfaces of the right and left cuffs and are prevented from breaking through the main panel 11 in these portions by virtue of the strengthening effect of the surrounding plies of the slide panel particularly at leading edge 14b, which plies are cooperatively and unitarily bonded by seal lines 16 to the main panel 11 and drain panel 15. The assembly of plies thus has relatively high tear strength both wet and dry in both longitudinal and transverse directions. The applied force at the leading edge 14b therefore advantageously causes the entire slide panel, as well as the main panel and the fixed drain panel 15, to advance uniformly in a common movement while retaining their same dimensional relationship and without structural failure, tearing, distortion or disarray.

The panels 11 and 15 are next brought to the edge of the table 20 as in FIG. 4 and the trailing edge 15c of the drain panel and the apron 18 are arranged downward from the table edge into a suitable receiver 19, for the purpose of collecting any fluids flowing over the surface of the drain panel in the direction of the arrows, over the edge of the table. It is a feature of the invention that the particular arrangement of the overlying plastic film panel facilitates movement of liquids released during the operation along the lines shown in FIG. 4 for drainage, as described, into the receiver. Advantageously, the liquids tend to follow the direction of their removal rather than to move laterally to the side edges of the drape. The latter features is particularly important in that the physician and attending nurses are not required continually to clean up the operating site during the operation. During the procedure further adjustment of the drape is ordinarily unnecessary. Afterward, the drape is discarded.

The materials used for the surgical drape are widely available and can be varied as desired. The main panel 11 can be made of any suitable material generally used for disposable surgical drapes. Ordinarily, it will be a cellulosic material treated for fluid repellency such as a scrim-reinforced, nonwoven fabric. The slide panel and drain panel are fluid-impervious, organic plastic film materials, such as polypropylene or ethylene-propylene copolymer. Preferably the plastic film is treated or formulated to have antistatic properties. An example of a satisfactory material is a plastic film having a thickness of about 0.5 mils made of polypropylene and suitable for sterilization. The panel materials can be fastened together with suitably applied adhesive such as a polyvinyl acetate-acrylate copolymer adhesive or, if desired, the organic films can be thermoplastically sealed to the main panel. Preferably the color and finish of the main panel should be chosen to minimize glare. The plastic film panels suitably can be transparent or colored as desired and preferably should have a matte finish or other finish which minimizes glare.

While embodiments of the invention in surgical drapes have been described with considerable detail in the foregoing description, it will be realized that wide variation can be made in such detail without departing from the spirit of the invention as set forth in the following claims.

I claim:

1. A surgical drape comprising in combination a main panel having front and back surfaces, slide panel means, and drain panel means,

the main panel comprising a fluid-repellent fibrous sheet having a hand-receiving cuff at one end and being adapted to be draped on its back surface part way over a table top with the opposite end extending beyond the table edge downwardly for runoff of fluids released over the top surface,

the slide panel means comprising a fluid-impervious organic film overlying the back surface of the main panel on at least the central portion and cuff end and also extending to the front surface around the cuff edge and having a lapel overlying the front surface of the cuff,

the drain panel means comprising a fluid-impervious organic film overlapping the slide panel and overlying the front surface of the main panel from the cuff towards the opposite end of the central portion of the main panel, the slide panel and drain panel means being mutually joined

to the main panel on lines coextensive with the edges of the panel means whereby the drape is fluid impervious and tear resistant within the area define by the cuff edge and said joining lines.

2. A surgical drape according to claim 1 having fold lines for folding the ends and sides of the drape into compact form, at least some of said fold lines lying within the area defined by the cuff edge and the said joining lines.

3. A surgical drape according to claim 2 wherein side fold lines and side joining lines coincide.

4. A surgical drape according to claim 1 wherein the cuff includes a contact zone uncovered by the slide panel for positioning under a patient.

5. A surgical drape according to claim 1 wherein the drain panel has a matte finish minimizing glare.

6. A surgical drape according to claim 1 wherein the panels are adhesively joined.

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