March 17, 1964 F. D. HUTCHINS 3,125,093

SURGICAL BANDAGE

Filed July 14, 1961

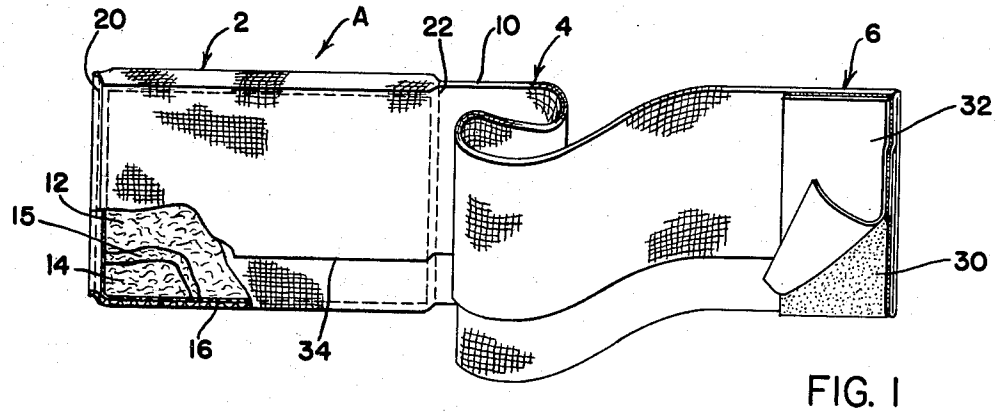


FIG. 1

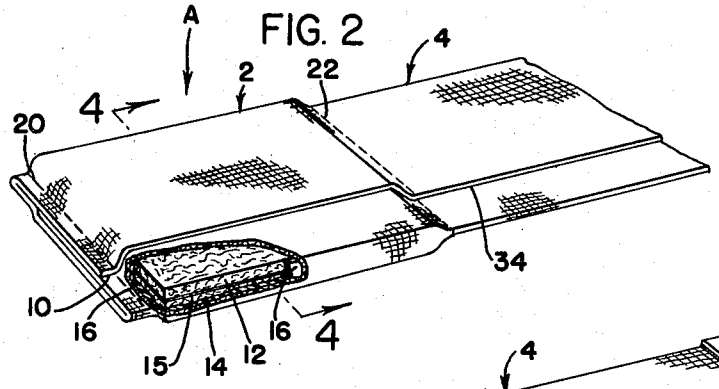


FIG. 2

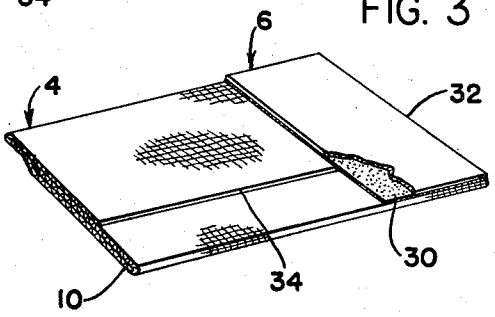


FIG. 3

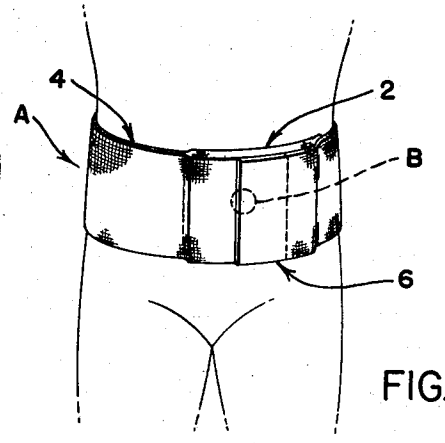


FIG. 5

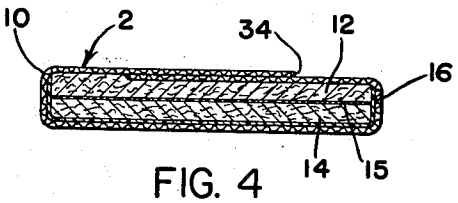


FIG. 4

INVENTOR.
FRIEDA D. HUTCHINS
BY Alfred C Body
ATTORNEY

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SURGICAL BANDAGE

Frieda D. Hutchins, 913 Sunset Drive, Lake Lucerne, Chagrin Falls, Ohio

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This invention relates to the art of surgical bandages and more particularly to a combined surgical bandage and abdominal binder for a profuse drainage wound such as colostomy or ileostomy. Although great medical progress has been made in surgical techniques and equipment, there have been no corresponding improvement in the surgical bandages for post-operative patients having a profuse drainage wound. Such wounds result from colostomies and ileostomies as well as other major surgical operations. Profuse drainage wounds require an absorbent dressing that accumulates the flow from the wound. In the case of a colostomy or ileostomy, the wound usually must be continuously covered by a dressing for the life of the patent. This presents particular problems for the bandage must be comfortable to the patient and must also have a dressing with an extreme capacity to absorb the discharge from the wound.

The amount of absorption of the dressing determines how often the dressing must be replaced. In the past, surgical bandages for profuse drainage have had an inadequate absorbent dressing portion which necessitated frequent changing of the bandage. The surgical bandages for profuse drainage wounds now in use are of two general types. The first is a Montgomery strap which consists of a series of intermediate straps between two adhesive sheets. The adhesive sheets are applied to the skin and the straps hold an absorbent dressing against the wound. The second generally used bandage for a profuse drainage wound is an adhesive tape applied directly over an absorbent dressing to hold the dressing against the wound.

These existing surgical bandages for profuse drainage wounds have many disadvantages besides inadequate absorption. The absorbent material is made relatively thick to give improved absorption of the fluid discharged from the wound. This results in a bulky dressing which, when used in combination with various securing means and protective sheets, affords extreme discomfort to the person wearing the dressing. Since the surgical bandages now being used are secured to the wound by an adhesive sheet applied to the skin, skin irritation is quite common when a patient has a wound which requires frequent changing. A patient having a profuse drainage wound which must be dressed intermittently over a period of years, such as the wound resulting from a colostomy or an ileostomy, requires the assistance from another person in changing the dressings now in use. Thus, it is very difficult for the patient to gain independence after such an operation.

This invention relates to an improved bandage for profuse drainage wounds which eliminates the disadvantages found in the prior bandages of this class and which is economical to manufacture. The bandage extends around the body to provide an abdominal binder when the bandage is used in the abdominal area as is the case in a colostomy. Thus, the bandage not only covers the wound, but also supports the operative area.

In accordance with the invention, the combined bandage and abdominal binder for profuse drainage wounds such as a colostomy or ileostomy comprises a relatively long intermediate strap of soft gauze having a dressing end and a pressure sensitive adhesive end. The dressing end has a relatively large dressing characterized by being greatly absorbent and an outer cover of substantially non-absorbent material. The adhesive end of the intermediate strap is provided with a layer of pressure adhesive material covered by a removable protective sheet that is stripped from the adhesive layer when the dressing is secured over the wound.

The dressing is placed over the wound and the intermediate gauze strap is wrapped around the body to bring the adhesive end adjacent to the dressing end. By removing the protective sheet from the adhesive layer, the adhesive layer may be secured to the dressing to secure the dressing onto the wound. Thus, the adhesive layer is not secured directly to the skin so contact of the adhesive with the skin is completely eliminated.

The main object of this invention is to provide an improved surgical bandage for a profuse drainage wound such as a colostomy or ileostomy which may be easily applied without requiring direct adhesion to the skin and which has a dressing to absorb discharge from the wound without requiring frequent changing.

A further object of this invention is to provide an improved combined bandage and binder that is easily applied and removed from a profuse drainage wound and which supports the operative area of a patient.

Another object of this invention is to provide a combined bandage and binder that is relatively comfortable for the patient to wear and which prevents damage to the patient's clothing.

A still further object of this invention is to provide a simplified and improved combined bandage and binder that may be economically manufactured and which may be packaged and handled at a minimum cost.

These and other objects and advantages will become apparent from the following description used to illustrate the preferred embodiment of the invention as read in connection with the accompanying drawing in which:

FIG. 1 is a pictorial view of the improved combined bandage and binder;

FIG. 2 is a partial pictorial view of the absorbent dressing end of the combined bandage and binder;

FIG. 3 is a partial pictorial view of the adhesive end of the combined bandage and binder;

FIG. 4 is a cross-sectional view taken along line 4—4 of FIG. 2; and,

FIG. 5 is a pictorial view of the combined bandage and binder as it is applied to a profuse drainage wound.

Referring now to the drawing, wherein the showings are for the purpose of illustrating a preferred embodiment of the invention, and not for the purpose of limiting same, FIG. 1 shows the combined bandage and binder A which has an overall length so that it may wrap around the body of a surgical patient. Various lengths are possible, although approximately 54 inches is found to be appropriate when using the bandage on a colostomy patient. The bandage has an absorbent dressing end **2** and an adhesive end **6** joined by an intermediate strap **4**. The bandage comprises a sheet of soft, elasticized self-adherent gauze **10** that is folded or otherwise formed to provide the intermediate strap **4** and a pocket for receiving the absorbent dressing **2**.

The absorbent dressing is positioned within the pocket formed by the gauze **10** and stitched or otherwise secured onto one end of the bandage. For purposes of illustrating the preferred embodiment, the absorbent dressing is secured within a pocket of the gauze **10** by stitching along lines **20** and **22**. Although it is realized that various means for securing the absorbent dressing within or onto the gauze **10** is within the scope of this invention.

The absorbent dressing **2** forms an important aspect of this invention, for this portion is positioned over the wound to absorb the drainage from the wound. The size of the dressing varies, although a dressing 8 inches wide and 14 inches long has proven satisfactory for a colostomy patient. A number of layers **12** and **14** of extremely absorbent material as the cellulose material

used in modern sanitary napkins are stacked to provide a multi-layer absorbent dressing. This is disclosed in FIGS. 2 and 4. The absorbent layers **12** and **14** may be separated by a layer of cotton **15**, although it is within the scope of this invention to use only one layer of absorbent material or use two or more layers without a separating layer of cotton. The layers **12** and **14** are completely surrounded by the gauze **10** and are applied directly to the profuse drainage wound. After the dressing has been placed over the wound, the absorbent layers become saturated by the drainage. Thus, if the patient is wearing clothing over the bandage, it is necessary to assure that the drainage does not pass through the layers **12** and **14** and come in contact with such clothing. To prevent this, a layer of non-absorbent cotton **16** surrounds the layers **12** and **14** except at the lower surface of layer **12**, which is in contact with the wound. This non-absorbent layer prevents the drainage from passing through the gauge **10**. The gauze is folded in any convenient manner to receive the dressing **2** and the overlapped position **34** may not be present, or it may be positioned on any surface of the bandage A.

Now referring to FIG. 3, the gauze **10** which forms the intermediate strap **4** and a pocket for the absorbent dressing **2**, has a layer **30** of pressure sensitive adhesive. Any number of pressure sensitive adhesive substances are satisfactory. One of such substances is Velcro. This adhesive layer **30** is placed on the gauze **10** at the same side as the exposed surface of absorbent layer **12**. To protect the pressure sensitive layer before the bandage is used, a protective sheet **32** of suitable material is placed over the layer of adhesive. This sheet is removed when the bandage is applied.

Referring to FIG. 5, the bandage A is positioned over a profuse drainage wound B. To do so, the absorbent dressing **2** is placed over the wound with the exposed surface of the absorbent layer **12** against the wound. The intermediate strap **4** is then drawn around the patient so that the adhesive end **6** overlaps the absorbent dressing **2**. To secure the bandage in place, the protective sheet **31** is stripped from the adhesive layer **30** and the adhesive layer is pressed against the outer surface of absorbent dressing **2**. Thus, the bandage is secured about the body without requiring adhesion to the skin. By providing highly absorbent layers **12** and **14**, having a composition quite similar to that found in modern sanitary napkins and similar articles, the drainage from wound B is absorbed for a prolonged period of time without necessitating removal of the bandage. Thus, if a patient has a profuse drainage wound which must be covered for a long period of time, a substantially fewer number of replacement bandages are needed. The patient may conveniently apply and remove this combined bandage and binder without assistance.

The gauze **10** is preferably elasticized and self-adherent so that it conforms to the curvature of the patient's body.

This lessens the discomfort accompanying the use of such a bandage and reduces the overall size so that clothing may be conveniently worn over the bandage.

The novel dressing may be removed by cutting intermediate strap **14**. If the patient is lying down, the strap is cut on either side and the bandage is removed without moving the patient.

A variety of changes may be made in the improved combined dressing without departing from the scope and spirit of the invention. For instance, the relative sizes of the various elements may be modified as long as extremely absorbent material such as cellulose used in modern sanitary napkins is in contact with the profuse drainage wound and the bandage extends around the body of the patient.

One embodiment of the present invention has been described wherein the combined bandage and binder is used for a wound in the abdominal area, but it is not intended that the invention should be limited to the particular use or the structural details disclosed. Various changes may be made within the scope of the appended claims.

Having thus described the invention, I claim:

1. In a combined surgical binder and bandage comprising, an intermediate strap, an absorbent dressing adjacent one end of said strap and an adhesive surface adjacent the opposite end of said strap, the improvement comprising: said intermediate strap being formed from a gauze-like material folded to provide a pocket at one end thereof, means for securing said dressing within said pocket so that it is surrounded by said gauze-like material, said dressing having a first and a second large area surface and an edge surface, a non-absorbent material covering only said first large area surface and said edge surface, said second large area surface being covered by only said gauze-like material and adapted to be positioned over a profuse drainage wound, and said adhesive surface being located on the same side of said gauze-like material as said second large area surface of said dressing.

2. The improvement as defined in claim 1 wherein said absorbent dressing comprises two pads of highly absorbent material separated by a porous sheet.

3. The improvement as defined in claim 1 wherein said adhesive surface is provided with a removable protective sheet, said sheet being coextensive with said surface.

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