

April 21, 1970

J. S. BURDING

3,507,282

COLOSTOMY BAG

Filed Jan. 10, 1968

FIG. 1

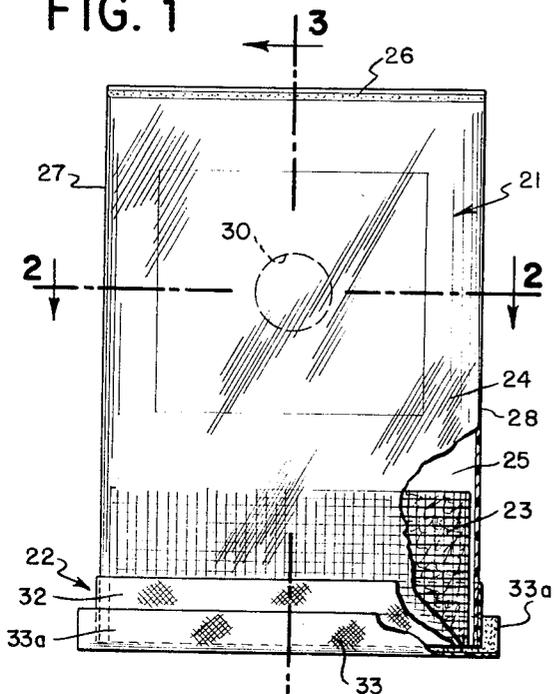


FIG. 4

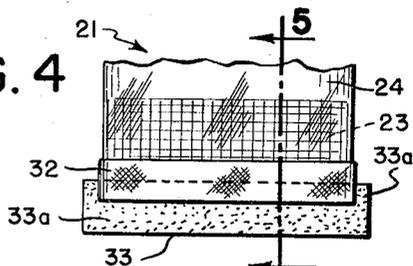


FIG. 6

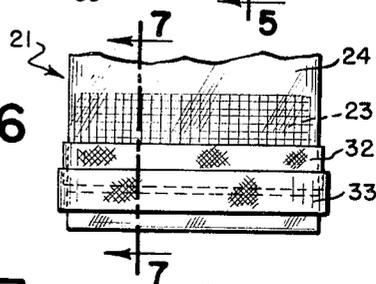


FIG. 7

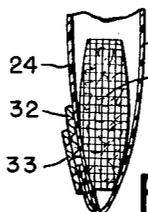


FIG. 8

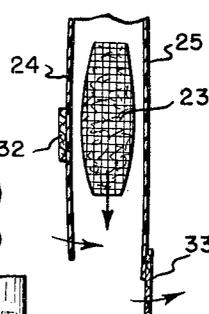


FIG. 2

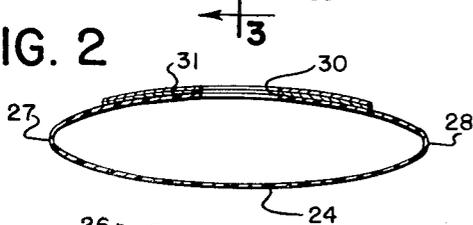


FIG. 9

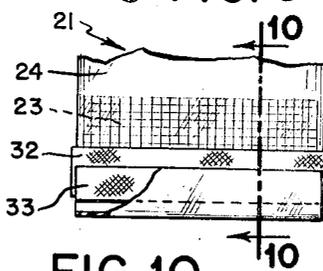


FIG. 3

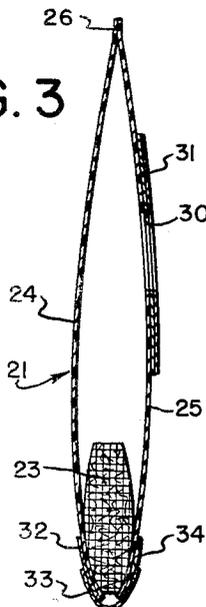


FIG. 5

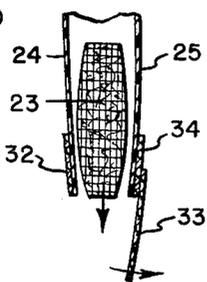


FIG. 10

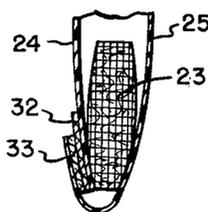
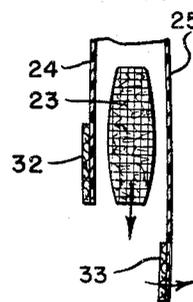


FIG. 11



INVENTOR

Judy S. Burding

Rennie, Edmonds, Morton, Taylor & Adams

ATTORNEYS

1

3,507,282

COLOSTOMY BAG

Judy S. Burding, 35 Edgewood Lane,
Bronxville, N.Y. 10708

Filed Jan. 10, 1968, Ser. No. 696,814
Int. Cl. A61f 5/44

U.S. Cl. 128—283

9 Claims

ABSTRACT OF THE DISCLOSURE

A reuseable colostomy bag is disclosed that may remain in place on the skin of the user for three to six days. The bag comprises a bag body of essential conventional construction having an open bottom, the open bottom being provided with resealable bottom closure means. The resealable bottom closure means comprises a strip of adhesive material secured to one of the side walls of the bag body adjacent the bottom edge thereof and a strip of fabric material secured to the other side wall of the bag body also adjacent the bottom edge thereof. The strip of adhesive material is adapted to be folded upwardly against the strip of fabric material and to be adhesively secured thereto, thereby forming a fluid-tight, gas-pervious closure for the open bottom of the bag body.

BACKGROUND OF THE INVENTION

A colostomy is a surgical operation in which the patient's colon is provided with an artificial opening for the drainage or evacuation of its contents. The external or visible portion of this opening, referred to as the stoma, is normally located on one side of the abdomen of the patient. The contents of the colon are discharged from time to time through the stoma, and means must be provided to collect the material thus discharged in as sanitary and unoffensive a manner as possible. To this end the patient usually employs a disposable colostomy bag. The colostomy bag is ordinarily formed of a flexible sheet material that is impervious to fluids, such as sheet rubber, rubberized fabric, thin plastic sheets or films, and the like, a conventional bag comprising two side wall panels joined together along the top, both sides, and bottom edges of the side walls. One of the side wall panels is formed with an opening adapted to receive the stoma, the bag being adhesively secured to the skin of the patient immediately surrounding the stoma. When properly applied to the person, the colostomy bag provides a gas-tight and fluid-tight receptacle for material discharged through the stoma.

It is obvious that in the passage of time the colostomy bag will become filled to its working capacity with material discharged through the stoma and must then be removed from the skin and replaced with a new colostomy bag. The frequency with which this must be done differs with the individual involved. However, in all cases in order to replace the bag the used bag must be peeled from the skin of the user in the same manner that one would peel surgical adhesive tape from the skin. A new bag is then adhesively secured in place of the used bag and the used bag is discarded.

Due to the need for fairly frequent replacement of conventional colostomy bags the use of such bags, while effectively serving their primary function, eventually causes the skin of the user surrounding the stoma to become irritated and tender. In time, the skin tends to erupt and blister and in severe cases to become raw and subject to infection. In addition to this severe irritation of the skin caused by the relatively frequent replace-

2

ment of conventional colostomy bags, the bag itself can, on occasion, become distended with gas which must be allowed to escape from the bag through a suitable hole deliberately made in the side wall of the bag. This, in turn, can cause the user such inconvenience or embarrassment as to interfere with his normal daily routine.

In view of the problems and disadvantages inherent in conventional colostomy bags, there exists an urgent need for a bag which will not cause the extreme irritation of the skin due to frequent replacement thereof and from which gas can escape without attendant social embarrassment.

SUMMARY OF THE INVENTION

I have now devised a reuseable colostomy bag that can remain in place on the skin of the user for three to six days in time, the bag being provided with bottom closure means that can readily be opened to allow periodic removal of the contents of the bag. The closure means is equally readily resealed to provide an essentially fluid-tight bottom seal that nonetheless permits the passage of gas therethrough. Means are also provided for essentially deodorizing any gas which may thus escape from within the bag.

The reuseable colostomy bag of my invention comprises a bag body having an open bottom, a bottom closure means for the open bottom, and advantageously a body of absorbent material contained within the bag body. The bag body is formed of two side wall panels of flexible, impervious sheet material connected together along the top and two side edges thereof with a gas and watertight seal. One side wall panel is formed with an opening adapted to receive the user's stoma, the outer surface of this side wall panel immediately surrounding the said opening being adapted to be adhesively secured to the skin of the user. The resealable bottom closure means comprises a strip of fabric material secured to the outer surface of one side wall panel adjacent the bottom edge thereof and a strip of adhesive material secured to the surface of the second side wall panel also adjacent the bottom edge thereof and extending below said bottom edge. The strip of adhesive material is adapted to be folded upwardly onto the strip of fabric material secured to the first side wall panel, the ends of the strip of adhesive material advantageously extending beyond the side edges of the bag body, whereby the bottom of the bag body is closed with a fluid-tight, gas-permeable closure when said strip of adhesive tape is adhesively secured to said strip of fabric.

As noted, the bag contains a body of absorbent material such as surgical cotton or gauze located in the lower portion of the bag adjacent the bottom closure means. The absorbent material serves to soak up any fluids that may be discharged into the bag and thus prevents the fluids from contacting the closure means at the bottom of the bag. In addition, the absorbent material advantageously contains a deodorant which deodorizes any gas that passes through the absorbent material and thereafter escapes from the bag through the gas-permeable bottom closure means.

When the bag is filled to its working capacity, the bag is emptied without removing it from the skin of the user by peeling the strip of adhesive material from the strip of fabric material, thereby opening the bottom of the bag. After removal of the contents and flushing of the bag, a fresh supply of absorbent material is placed within the bag and the bottom of the bag resealed by folding the strip of adhesive material upwardly and onto the strip of fabric material.

BRIEF DESCRIPTION OF THE DRAWING

The improved colostomy bag of my invention will be better understood from the following description in conjunction with the accompanying drawings of which:

FIG. 1 is a side view, partly broken away, of an advantageous embodiment of the colostomy bag of my invention,

FIG. 2 is a sectional view along line 2—2 of FIG. 1,

FIG. 3 is a sectional view along line 3—3 of FIG. 1,

FIG. 4 is a fragmentary view showing the lower end of the colostomy bag with the bottom closure means in its open condition,

FIG. 5 is a sectional view along line 5—5 of FIG. 4,

FIG. 6 is a fragmentary view showing another embodiment of the resealable bottom closure means for the colostomy bag of my invention,

FIG. 7 is a sectional view along line 7—7 of FIG. 6,

FIG. 8 is a sectional view similar to FIG. 7 showing the bottom closure means of the bag in its open condition,

FIG. 9 is a fragmentary view showing yet another embodiment of the bottom closure means for the colostomy bag of my invention,

FIG. 10 is a sectional view along line 10—10 of FIG. 9, and

FIG. 11 is a sectional view similar to FIG. 10 showing the bottom closure means in its open condition.

DETAILED DESCRIPTION

As shown best in FIGS. 1, 2, and 3 of the drawings, the colostomy bag of my invention comprises a bag body 21 formed of a flexible impervious sheet material, such as extruded polyethylene film, the bag body being provided with a resealable bottom closure means 22 and, advantageously, with a body of absorbent material 23 disposed within the bag body adjacent the bottom closure means 22. The bag body 21 advantageously comprises two side wall panels 24 and 25 that are joined together in fluid-tight relationship along the top edge 26 and the side edges 27 and 28 of the side wall panels. Side wall panel 25 is formed with an opening 30 adapted to receive the stoma of the user, and the outer surface of the side wall panel 25 in the area immediately surrounding the opening 30 is provided with a layer 31 of adhesive material that is adapted to adhesively secure the bag to the skin of the user.

In the embodiment of my invention shown in FIGS. 1 through 5, the bottom closure means 22 comprises a strip of fabric or equivalent material 32 secured to the outer surface of the side wall panel 24 adjacent the bottom edge thereof, and a strip of adhesive material 33 secured to the outer surface of the side wall panel 25 also adjacent the bottom edge thereof. The strip of adhesive material 33 extends downwardly beyond the bottom edge of the side wall panel 25 as shown in FIG. 4 and is adapted to be folded upwardly and onto the strip of fabric material 32 as shown in FIG. 1. The strip of adhesive material adheres tenaciously (but nonetheless removably) to the strip of fabric material, thereby closing the open bottom of the bag body 21. The strip of adhesive material 33 can be attached directly and permanently to the outer surface of the side wall panel 25 or, as shown best in FIG. 5, the strip 32 can be adhesively secured to an intermediate strip of fabric material 34. The latter arrangement is advantageous in that it permits the user to replace the strip of adhesive material 33 in the event it becomes unuseable for any reason. The ends 33a of the strip of adhesive material 33 advantageously extend slightly beyond the side edges 27 and 28 of the bag body 21 in order to permit these end portions of the strip to be sealed together when the strip 33 is folded upwardly as shown in FIGS. 1 and 3.

The body of absorbent material 23 advantageously is formed of absorbent cotton or gauze. However, other absorbent materials such as foamed plastic sponge, ab-

sorbent paper and the like may also be employed. The absorbent material 23 is preferably treated with a deodorant prior to being inserted in the bottom of the bag. When in position in the bag, the absorbent material 23 absorbs or soaks up any fluids which may enter the bag and also serves to deodorize any gas which may pass through the absorbent material and then through the gas-pervious closure means of the bag.

As previously mentioned, the bottom opening of the bag body 21 is closed by folding the strip of adhesive material 23 upwardly and onto the strip of fabric material 32, as shown best in FIGS. 1 and 3. The bottom of the bag is opened by peeling the strip of adhesive material 33 from the surface of the fabric material 32 and then unfolding the strip 33 downwardly as shown best in FIGS. 4 and 5. The contents of the bag can then be removed, the bag flushed out, the adsorbent material 23 renewed, and the bottom closure means 22 resealed without removing the bag from the skin of the user.

In the embodiment of my invention shown in FIGS. 6, 7, and 8, the strip of fabric material 32 is spaced a short distance away from the bottom edge of the side wall panel 24 (as shown best in FIG. 8). The bottom opening of this embodiment of my invention is closed by bringing the bottom edge portions of the side walls 24 and 25 together and then folding them upwardly together (as shown best in FIG. 7) so that the strip of adhesive material 33 can be secured to the strip of fabric material 32 as shown in FIGS. 6 and 7. The bottom of the bag is opened by peeling the strip of adhesive material 33 from the strip of fabric material 32, followed by unfolding the bottom edge portions of the side walls 24 and 25 as indicated in FIG. 8.

The embodiment of the improved colostomy bag of my invention shown in FIGS. 9, 10, and 11 is provided with yet another modification of the bottom closure means 22. In this embodiment of my invention the strip of fabric material 32 is positioned adjacent the bottom edge of the side wall 24 as in the case of the embodiment shown in FIGS. 1 to 5 of the drawing. However, the strip of adhesive material 33 is secured to the inner surface of the side wall panel 25, as shown best in FIG. 11. The bottom of the bag is closed by folding the lower end portion of the side wall 25 upwardly so that the strip of adhesive material 33 will adhere to the strip of fabric material 32 on the side wall 24, as shown in FIGS. 9 and 10.

The bag body 21 may be formed of any suitable flexible, impervious sheet material including rubber sheet, fluid-impervious fabric (for example, rubberized fabric), extruded or cast plastic sheet or film, and similar materials. However, I presently prefer to employ extruded polyethylene film because of the strength, imperviousness, heat sealability and physiological inertness of this material. The strip of fabric material 32 that is secured to the outer surface of the side wall panel 24 is advantageously a strip of surgical adhesive tape, or a similar fabric-backed, pressure-sensitive adhesive tape. However, other fabric material including the water-proof fabric sheet material, micro hook- and- eye fabric closure tapes, and the like may be employed. The essential quantity of the fabric strip 32 is that the strip of adhesive material 33 can be repeatedly adhered to and removed from the strip 32. That is, the strip of adhesive material 33 will readily adhere to the surface of the fabric strip 32 and can readily be removed therefrom. The strip of adhesive material 33 is advantageously formed of surgical adhesive tape. However, it can equally well be formed of any suitable pressure-sensitive tape, or from such adhesive fabrics as the micro hook- and- eye type, such as that sold under the tradename "Velcro" by Hartwell Corporation.

An advantageous modification of the colostomy bag of my invention involves providing the bag body 21 with a semicircular or curved top edge 26 that virtually eliminates the sharp corners at the intersection of the top

5

edge and the two side edges 27 and 28 of the bag body. This modification of my invention facilitates cleaning of the interior of the bag when the contents of the bag are removed therefrom. In yet another modification of the colostomy bag of my invention, the adhesive layer 31 has an antiseptic or antibiotic material (for example, an antibiotic powder) incorporated in the adhesive itself or sprinkled onto the outer surface of the adhesive layer 31. The adhesive layer 31 is then covered with a protective layer of paper or fabric until it is to be applied to the skin of the user. At that time, the paper or fabric protective layer is removed and the adhesive layer 31 containing the antibiotic or antiseptic material is applied to the skin.

I claim:

1. A reusable colostomy bag comprising a bag body having a fluid-tight top and sides and an open bottom provided with resealable bottom closure means, the bag body being formed of two side wall panels of impervious sheet material connected together in fluid-tight relationship along the top and two side edges thereof, one side wall panel being formed with an opening adapted to receive the user's stoma, the resealable bottom closure means comprising a strip of fabric material secured to the outer surface of one side wall panel adjacent the bottom edge thereof and a strip of adhesive material secured to the surface of the second side wall panel adjacent the bottom edge thereof, said strip of adhesive material being adapted to be folded upwardly onto the strip of fabric material to form a fluid-tight, gas-permeable closure for the bottom of the bag.

2. The colostomy bag according to claim 1 in which a body of absorbent material is contained within the bag body adjacent the resealable bottom closure means.

3. The colostomy bag according to claim 2 in which the body of absorbent material contains a deodorant.

4. The colostomy bag according to claim 1 in which the adhesive layer surrounding the opening in the side wall panel contains an antibiotic.

5. The colostomy bag according to claim 1 in which the strip of adhesive material adjacent the bottom edge of the bag extends below the bottom edge of the side wall panel to which the strip is secured.

6. The colostomy bag according to claim 5 in which the strip of adhesive material extends laterally beyond

6

the side edges of the side wall panel to which the strip is secured.

7. A reusable colostomy bag comprising a bag body having a fluid-tight top and sides, and an open bottom provided with resealable bottom closure means, and a body of absorbent material contained within said bag body,

the bag body being formed of two side wall panels of flexible impervious sheet material connected together along the top and two side edges thereof with a water-tight seal, one side wall panel being formed with an opening adapted to receive the user's stoma, the outer surface of said side wall panel surrounding said opening being adapted to be adhesively secured to the skin of the user,

the resealable bottom closure means comprising a strip of fabric material secured to the outer surface of one side wall panel adjacent the bottom edge thereof and a strip of pressure sensitive adhesive material secured to the surface of the second side wall panel adjacent the bottom edge thereof, said strip of adhesive material extending below said bottom edge and being adapted to be folded upwardly onto the strip of fabric secured to the first side wall panel, whereby the bottom of the bag body is provided with a fluid-tight, gas-permeable closure when said strip of adhesive material is secured to said strip of fabric.

8. The colostomy bag according to claim 7 in which the body of absorbent material contains a deodorant.

9. The colostomy bag according to claim 7 in which the strip of adhesive material extends laterally beyond the side edges of the side wall panel to which it is secured.

References Cited

UNITED STATES PATENTS

3,077,192	2/1963	Berger	128—283
3,089,493	5/1963	Galindo	128—283
3,109,578	11/1963	Davis	128—275 XR
3,154,239	10/1964	Madsen	128—275 XR
3,186,409	6/1965	Bartz	128—275
3,385,298	5/1968	Fenton	128—283
3,403,410	10/1968	Benzel et al.	128—295

CHARLES F. ROSENBAUM, Primary Examiner