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Elmore et al.

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[54] **COLOSTOMY FECAL POUCH VENTING MEANS**

[76] Inventors: **Austin E. Elmore; Ernest A. Uhlmann,** both of 4533 N. Scottsdale Rd., Scottsdale, Ariz.

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[52] **U.S. Cl.** **128/283,** 128/275

[51] **Int. Cl.** **A61f 5/44**

[58] **Field of Search** 128/283, 275

[56] **References Cited**

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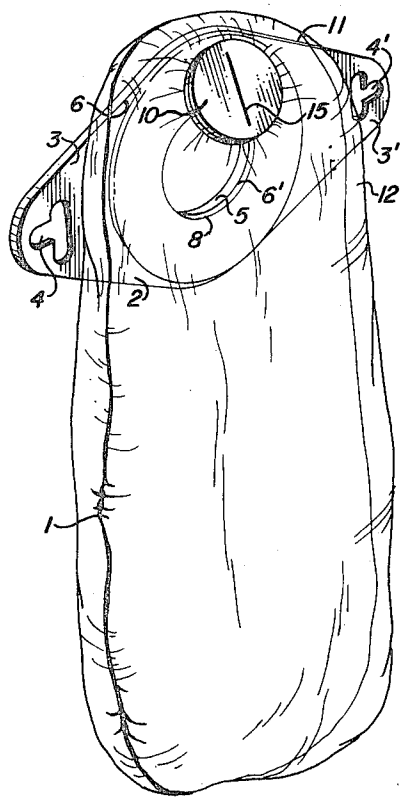
Primary Examiner—Lucie H. Laudenslager

Attorney, Agent, or Firm—Warren F. B. Lindsley

[57] **ABSTRACT**

A colostomy attachment employing a fecal pouch with self venting means for trapped gases.

9 Claims, 8 Drawing Figures



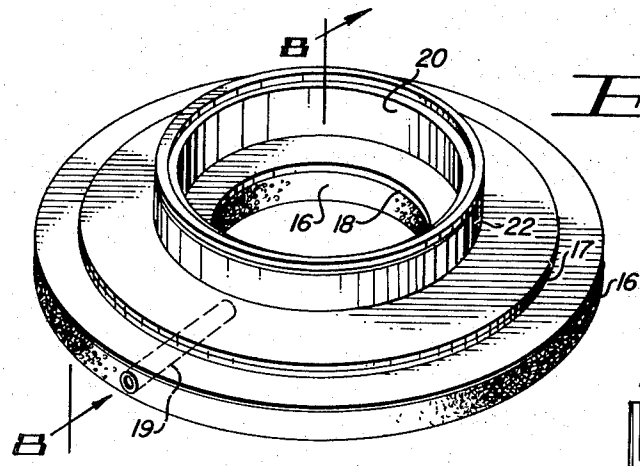


FIG-5

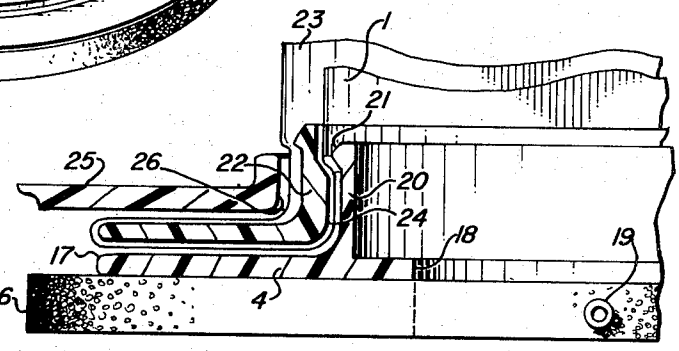
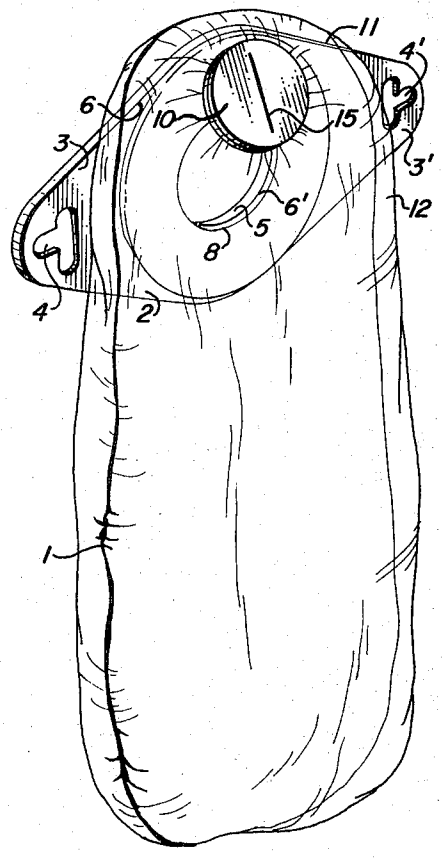


FIG-4

FIG-1



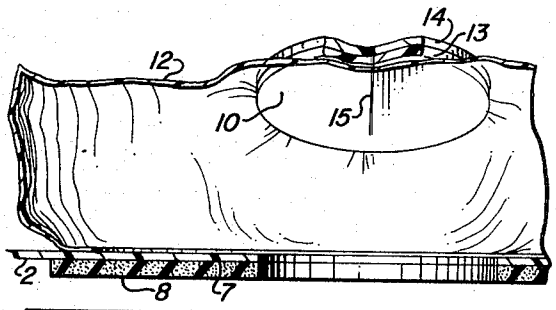


FIG-3

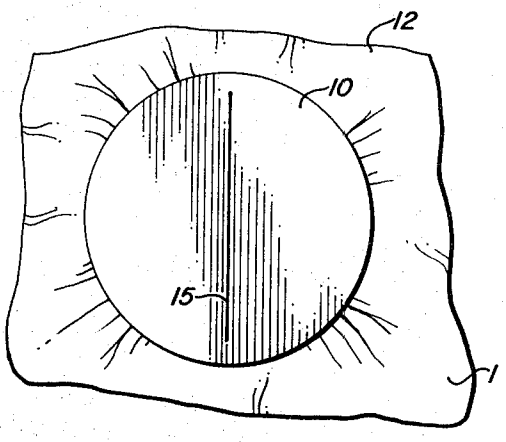


FIG-2

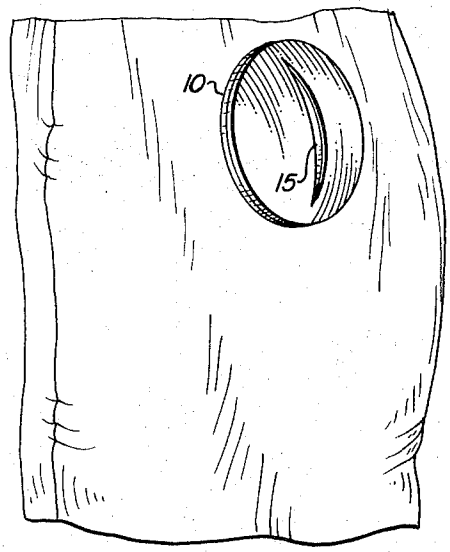


FIG-6

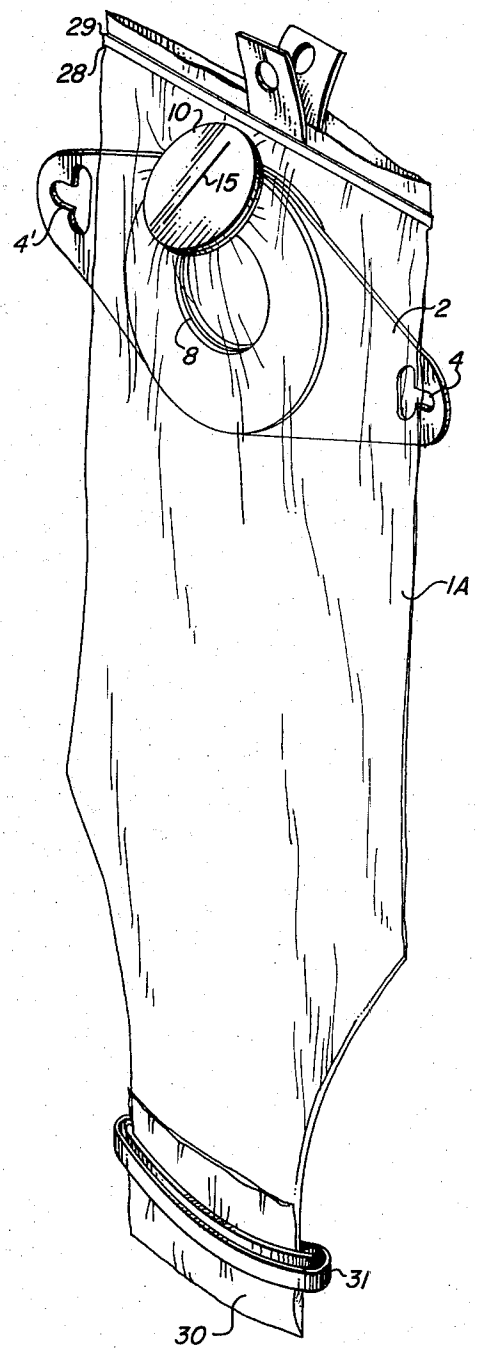


FIG-7

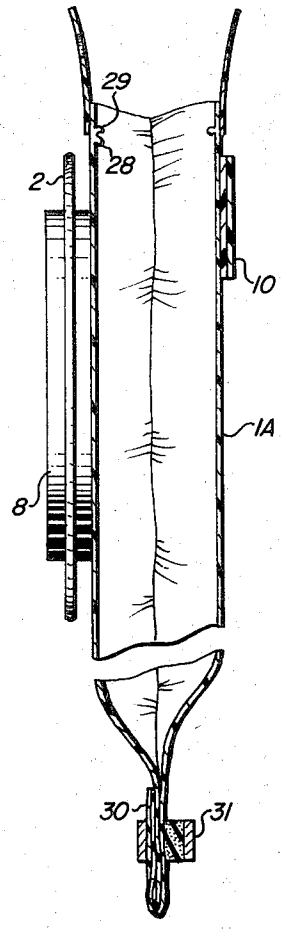


FIG-8

COLOSTOMY FECAL POUCH VENTING MEANS

BACKGROUND OF THE INVENTION

This invention relates to medical and patient care apparatus and is particularly directed to means for venting gases from colostomy fecal pouches.

Heretofore, gases escaping from stoma openings have been a problem for colostomy patients since there has been no satisfactory and convenient way to release these gases from a fecal pouch. The common practice among colostomy patients has been to pull the sealing collar of the fecal bag or pouch away from the body around the stoma opening sufficiently to let the gases escape, however, this action breaks the seal of the collar around the stoma opening and at times results in the leakage of fecal matter from the pouch, particularly when the patient is in bed.

SUMMARY OF THE INVENTION

In accordance with the invention claimed, an improved, simple and easily manufactured valve is provided for automatic controlled venting of gases from a colostomy fecal pouch without disturbing the tight body seal of the pouch which must be maintained around the stoma opening.

It is, therefore, one object of this invention to provide a positive, automatically controlled venting means for fecal pouches.

Another object of this invention is to provide a venting means for fecal pouches while maintaining a tight seal around the stoma opening.

A further object of this invention is to provide fecal pouch venting means which are simple and relatively inexpensive to manufacture.

A still further object of this invention is to provide a disposable fecal pouch with an inexpensive vent.

A still further object of this invention is to provide fecal pouch venting means independent of the pouch itself so that pouches may be disposed of as required while the vetning means is reusable with other pouches for relatively long periods of time.

A still further object of this invention is to provide a vent means for fecal pouches, which under a controlled and regulated manner, gradually and continuously dispells the trapped gases.

A still further object of this invention is to provide a venting means for fecal pouches which will restrain the leakage of fecal matter from the pouch while expelling gases trapped therein even when a patient is in bed.

Further objects and advantages of the invention will become apparent as the following description proceeds and the features of novelty which characterize this invention will be pointed out with particularity in the claims annexed to and forming a part of this specification.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention may be more readily described by reference to the accompanying drawing in which:

FIG. 1 is a perspective view of a disposable fecal pouch with improved venting means and embodying the invention.

FIG. 2 is an enlarged plan view of the vent shown in FIG. 1.

FIG. 3 is a fragmental sectional view through the fecal pouch vent shown in FIG. 1 to illustrate its construction.

FIG. 4 is an enlarged fragmental sectional view of a modified form of vent for a fecal pouch assembly permitting disposal of the fecal bag without disturbing the venting means for the pouch assembly.

FIG. 5 is an enlarged perspective view of parts shown in FIG. 4.

FIG. 6 is a perspective view showing how the vent of FIGS. 1, 2 and 3 opens under pressure.

FIG. 7 is a perspective view of a combined irrigating and fecal pouch employing the venting means disclosed.

FIG. 8 is a sectional view of the pouch shown in FIG. 7 with the top open.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring more particularly to the drawing by characters of reference, FIG. 1 discloses a fecal beg or pouch 1 which is usually made from a relatively strong, soft moisture proof material, such as, for example, transparent plastic material, sealed closed when attached to a stoma opening of a patient in leak-proof arrangement so that fecal matter is contained within the pouch. The plastic material used is usually very flexible so that it will fit body contours without showing through a patient's clothing.

One form of disposable fecal pouch, as shown in FIGS. 1 and 3, utilizes a plastic belt-plate 2 usually having ears or wings 3, 3' extending therefrom defining suitable slots or openings 4, 4' therein to which the ends of an elastic belt (not shown) is connected. The belt is positioned around the patient's body to hold the pouch in place. The belt plate 2 has a central, preferably circular, opening 5 therethrough sized to fit around the stoma opening of a patient. Since the size of the stoma openings may vary with the patient, the size of the opening 5 must be large enough to encircle any one of them.

The fecal pouch 1 is secured to the belt plate on the outer face 6 thereof by any suitable means, such as an adhesive, and is provided with an opening 6' into the pouch which coincides with opening 5 in belt plate 2 so that opening 5 communicates with the interior of the bag or pouch 1.

The inner face 7 of belt plate 2 has an annular ring 8 of non-absorbent, closed-cell plastic foam, or other suitable material, secured thereto surrounding opening 5 in belt plate 2 to provide a cushion and seal around the patient's stoma opening to prevent leakage of fecal matter from the pouch at this point.

In use, the patient places the belt-plate over the stoma opening with the cushion and seal ring 8 against his body, and then tightens the elastic belt, not shown, which is attached in openings 4, 4' of the belt plate to securely hold the seal ring 8 against his body.

Since the escape of gas from a stoma opening is not predictable or controllable by a patient, it enters the fecal pouch and causes it to inflate like a balloon, resulting in the patient's clothing being distorted. Accordingly, a need exists for releasing this gas before it accumulates enough to cause the bulging problem.

In accordance with the invention claimed, a simple venting means 10 is installed on the outer face 12 of the bag or pouch 1 adjacent the upper or top portion 11

thereof. The venting means **10** is preferably installed as close to the upper and **11** of the pouch as possible, and preferably above the opening **5** in the belt plate, as shown in FIG. **1**, to preclude leakage from the pouch of anything but gases.

The simple venting means **10** comprises two small flat patches or pads of flexible plastic material **13** and **14** laminated together, as by an adhesive and secured to the face of the pouch, either on the inside or outside surface thereof. Pads **13** and **14** of the venting means, as well as pouch **1**, have a slot **15** extending therethrough for venting purposes. Slot **15** is preferably vertically disposed, as shown, with the slots through the pads **13** and **14** and pouch **1** being contiguous to provide the venting means for the pouch.

To provide for controlled venting of the pouch, venting means **10** is composed of two pieces formed from plastic, rubber, or other suitable material, having different degrees of flexibility or hardness. The softer, more flexible pad **13**, faces toward the inside of pouch **1**; and the harder, less flexible pad **14**, faces toward the outside of the pouch.

The purpose of using a softer, more flexible pad **13** on the inner side of the venting means **10** and the harder, less flexible pad **14** on the outside is to insure proper closing of the vent when it is not in use. The harder, relatively stiffer, pad **14** forces slot **15** of the venting means **10** closed as it returns to its original, relatively flat position after distortion by gas under pressure in bags and the softer, more flexible pad **13** serves to insure the sealing or closing of slot **15** from the leakage of fecal matter.

FIG. **6** clearly shows how gas pressure in bag or pouch **1** tends to force the edges of slot **15** open to permit gases to escape automatically when the gas pressure reaches a sufficient value. Obviously, all of the gases will not escape automatically, however, the patient may easily exhaust the remaining gases from the pouch by applying hand pressure to the pouch to force all gases from pouch **1** out through slot **15** of the venting means **10**. As soon as the gases are exhausted, slot **15** of the venting means **10** will automatically close and seal as above described.

FIGS. **4** and **5** illustrate a modified form of the automatic venting means disclosed in FIGS. **1-3**. In this modified form of venting arrangement, a relatively thick cushion and sealing ring **16** of non-absorbent, closed cell plastic foam is employed. This ring is similar to ring **8** of FIGS. **1–3** and is secured to a suitable plastic sealing ring carrier member **17** which has a central stoma embracing opening **18** extending therethrough.

The venting means of FIGS. **4** and **5** comprises a small plastic tube **19** extending radially through the sealing ring **16** and providing a venting channel extending from the opening **18** in ring **16** to the outside thereof, as can be clearly seen from the drawings. In operation, it is preferred that the sealing ring be positioned on the patient's body so that the vent tube is vertically disposed with the outer end of the tube uppermost to minimize the possibility of leakage of fecal matter from pouch **1**.

The venting tube **19** provides a passageway for gases inside of pouch **1** to escape therefrom automatically and continuously as required.

The venting arrangement of FIGS. **4** and **5** is shown for use with a special fecal pouch mounting assembly, including the sealing ring carrier **17** which has an outwardly extending flange **20** having an annular boss **21** on its outer end. A fecal pouch carrying ring **22** is provided to carry and hold pouch **1** in wearing position. The pouch is installed on ring **22** by inserting the loose end **23** of the pouch through the central opening **24** of ring **22** and folding the loose end **23** of the pouch back over the outer periphery of the ring **22**. Ring **22** may then be snapped in place around flange **20**, as shown in FIG. **1**, to provide a tight mounting for the pouch on the carrier **17**.

A belt attachment plate **25** having a central opening **26** to fit over the pouch carrying ring **22** is then snapped in placed over the pouch ring **22**, and the belt, not shown, is used to secure the assembly tightly against the patient's body.

FIGS. **7** and **8** illustrate the venting means **10** mounted on a modified form of bag or pouch **1A** which may be used for irrigating the colon as well as a fecal pouch. This type of pouch is desirable for patients who may have diarrhea and may require more frequent irrigating or pouch cleaning action. As shown, pouch **1A** is provided with sealing ring **8** and belt plate **2** similar to that shown in FIG. **1**, however, the top or upper end of the pouch is provided with a plastic zipper closure **28–29** to permit opening of the pouch for access to the stoma opening for irrigating, or for merely rinsing out the pouch when required.

The bottom of pouch **1A** may be closed by folding its open lower end **30** back on itself and applying a suitable clamp **31** such as the well known barret thereto to provide a sealed closure.

Pouch **1A** may be opened for rinsing by removal of clamp **31** and unfolding its end **30**.

It can be seen that when the top and bottom of pouch **1A** are closed and sealed, the venting means **10** will operate in the same manner as on pouch **1** of FIG. **1**.

It is deemed apparent from the above that a long sought answer to the problem of venting gases from a fecal pouch is provided which is simple, inexpensive, and automatic and will maintain a desired seal of the bag or pouch around the stoma opening. This type of bag or pouch will provide colostomy patients with peace of mind from the effects of such gases and prevent undesirable leakage of fecal matter from the pouch.

Although the venting means **10** is shown as comprising a pair of laminated pieces of flat plastic material, it should be recognized that this venting means may comprise one piece of flat, flexible material which cooperates with the plastic material of the pouch to form the venting and sealing means afforded by venting means **10** of FIGS. **1–3** and **6–8**.

Even though the fecal pouches **1** and **1A** are shown with belt attachment means they may utilize merely an adhesive means for fastening the pouch to the skin of the user.

It will be apparent to those skilled in the art that changes and other modifications may be made to the apparatus shown and described herein without departing from the spirit of the invention or from the scope of the appended claims.

What is claimed is:

1. A colostomy attachment of a soft, resilient, moisture proof material with self venting means for gases trapped therein comprising:

a closed pouch for receiving fecal matter,

said pouch being provided with an opening thereinto of sufficient size for surrounding a stoma opening of a user, and

venting means for said pouch comprising a first flexible, substantially flat surfaced pad secured to one surface of said pouch, said first pad and said one surface of said pouch having a contiguous venting slot extending therethrough which opens when gases in said pouch distort the surfaces of said first pad and said pouch,

said venting means for said pouch further comprises a second slotted flexible, substantially flat surfaced pad, laminated to said first pad, said first and second pads and said one surface of said pouch having their slots in alignment forming a contiguous venting slot extending through said pouch.

2. The colostomy attachment set forth in claim **1** wherein:

said first and second pads are formed of two different pieces of plastic material having different flexibility characteristics.

3. The colostomy attachment set forth in claim **1** wherein:

said one of said pads adjacent the surface of said pouch is formed of a relatively more flexible material than the other of said pads to insure the sealing of said venting slot when said pouch is not exposed to internal pressure.

4. The colostomy attachment set forth in claim **1** wherein:

said pouch is of an elongated configuration having its longitudinal axis positioned vertically when placed around a stoma opening when the user is standing, and said venting means is vertically arranged in said pads and said pouch when said pouch is so positioned.

5. The colostomy attachment set forth in claim **4** wherein:

said venting means is positioned on said pouch above said opening for surrounding said stoma opening when said pouch is so positioned.

6. The colostomy attachment set forth in claim **1** wherein:

said opening in said pouch and said venting means are positioned adjacent one end of said pouch.

7. The colostomy attachment set forth in claim **1** wherein:

said opening in said pouch and said venting means are positioned adjacent one end of said pouch with said venting means being positioned closer to said one end.

8. The colostomy attachment set forth in claim **1** in further combination with:

a plate secured to the surface of said pouch and surrounding said opening in said pouch,

said plate defining an opening axially aligned with said opening in said pouch for surrounding the stoma opening of the user,

a non-absorbing annular ring secured to the exposed surface of said plate around the periphery of the opening in said plate for engaging the body of the user, and

wherein said venting means for said pouch is provided in said ring and comprises a passageway extending through said ring between said opening in said ring and the periphery of said ring for venting said pouch.

9. The colostomy attachment set forth in claim **8** in further combination with:

a thin plastic tube arranged within said passageway for lining said passageway.

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