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(56) Documents Cited

EP 0985390 A	**EP 0564106 A**
EP 0535801 A	**US 5085652 A**
US 4938750 A	**US 4723951 A**
US 4490145 A	

(58) Field of Search
INT CL[7] **A61F 5/441 5/445**
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(54) Abstract Title
Ostomy bags

(57) The invention relates to an ostomy bag 2 provided with a vent opening 16 at or towards an upper end thereof and an adhesive closure 22, 24, 26 removably covering the vent opening 16, the adhesive closure being removable to allow excess flatus gas to be vented from the bag 2.

FIG. 1

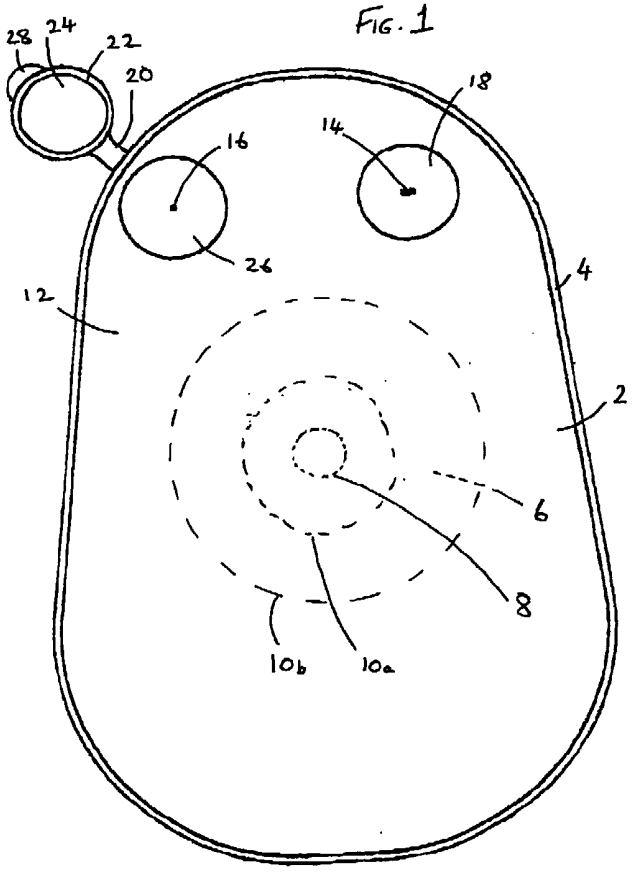

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FIG. 1

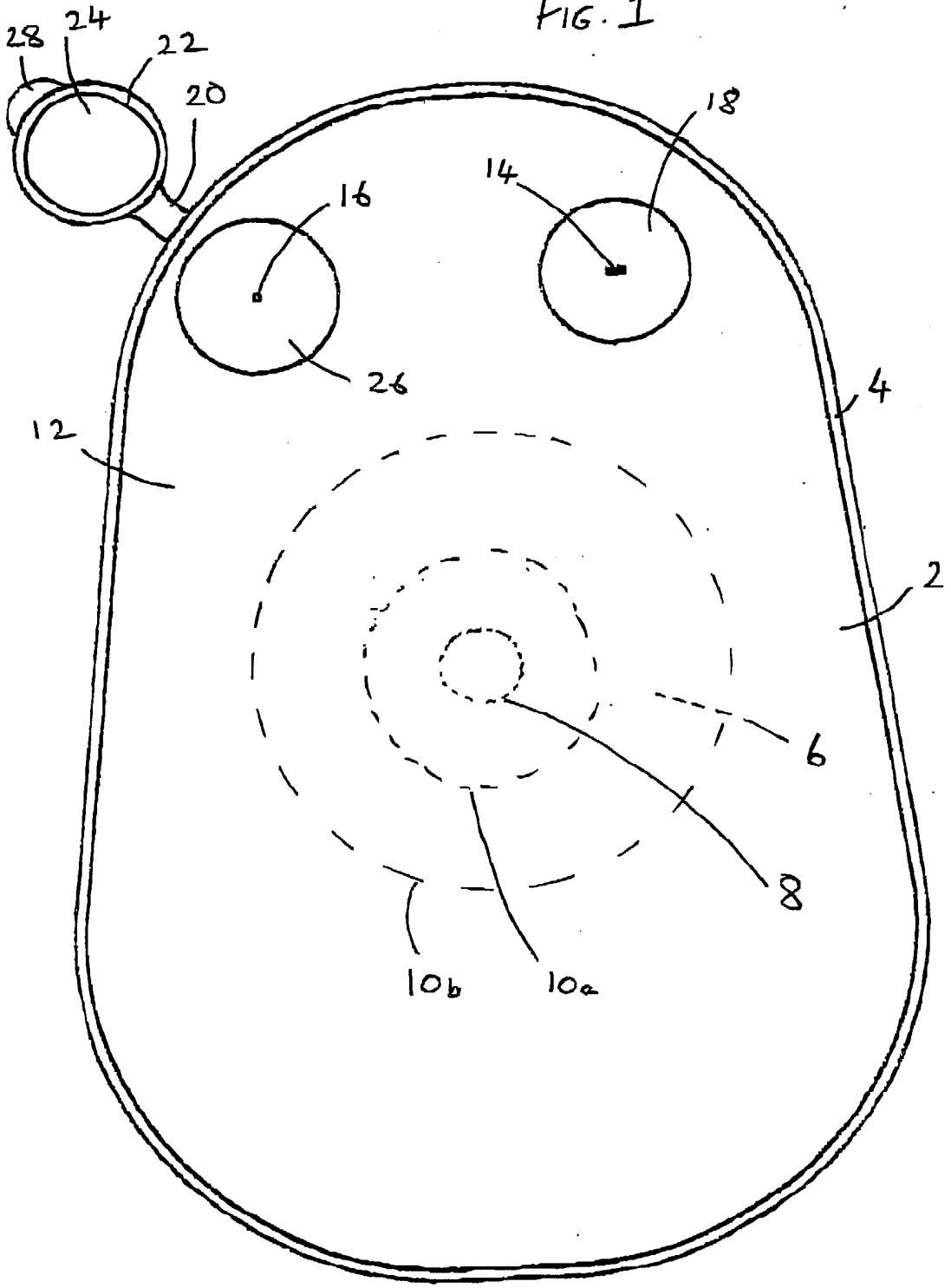
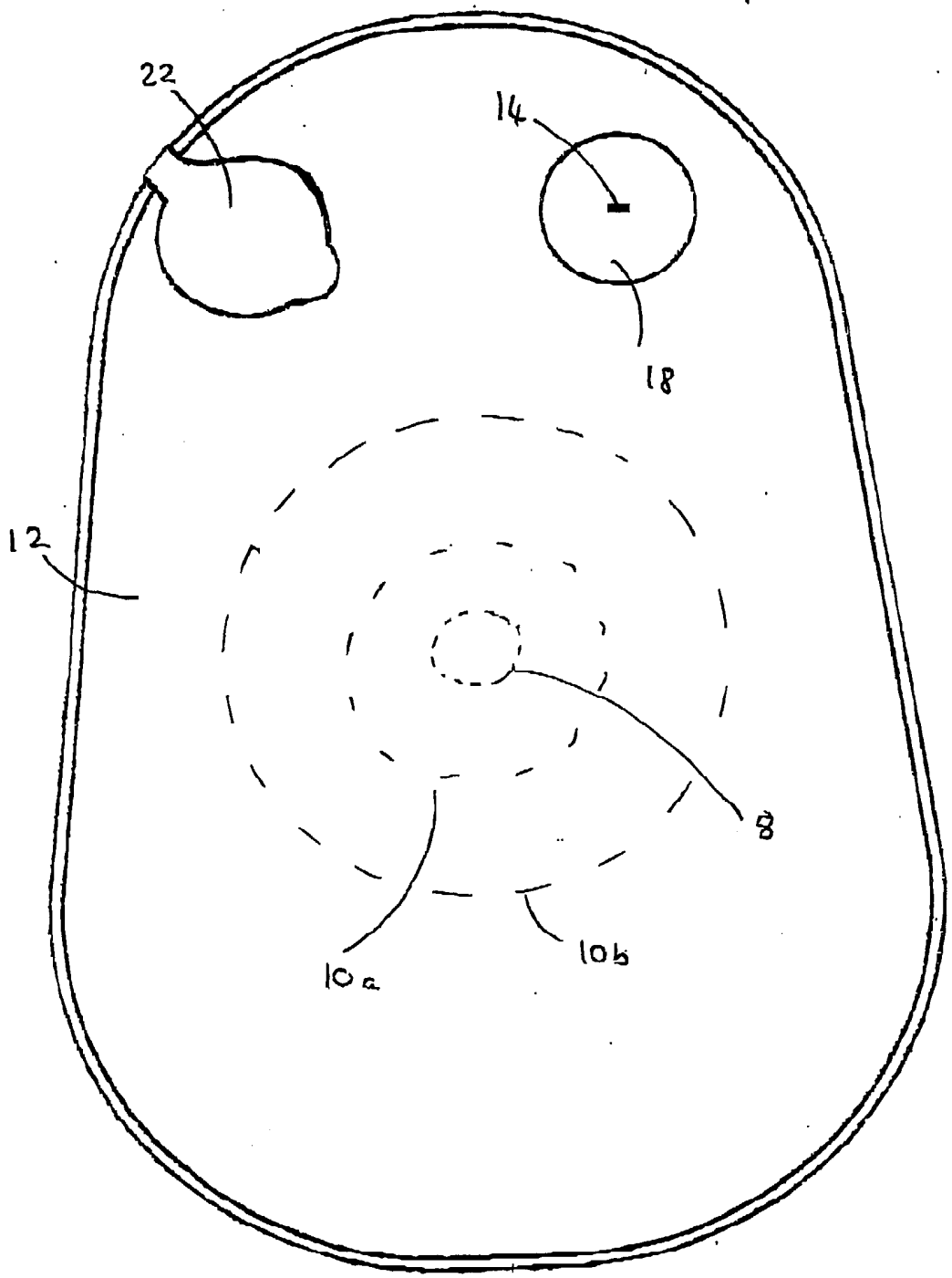


FIG. 2



OSTOMY BAGS

This invention relates to ostomy bags, and in particular to ostomy bags having a flatus gas relief valve.

Background of the Invention

Ostomy bags such as ileostomy and colostomy bags for collecting liquid and semi-solid waste from ileostomy and colostomy patients are well known. Such bags typically comprise a waterproof bag provided with a means (such as an adhesive flange) for attaching the bag about the stomal opening of the patient. One of the problems with ostomy bags, particularly ileostomy and colostomy bags, is build up in the bag of flatus gases which tend to inflate the bag thereby causing discomfort and an unsightly appearance. Many colostomy bags therefore are provided with a small opening for venting flatus gases to the external atmosphere. In order to prevent emission of noxious smells, the vent openings are typically covered by a filter, for example a charcoal filter.

A problem encountered with many filters is that gases can only flow through them at a relatively low rate and this means that the filter cannot accommodate large and sudden increases in flatus gas pressure. Thus, even with a filtered vent opening, the problem of ballooning of colostomy bags still exists.

It is an object of the personal invention to overcome or at least substantially alleviate the aforementioned problems.

Summary of the Invention

Accordingly, the invention provides an ostomy bag provided with a vent opening at or towards an upper end thereof and an adhesive closure removably covering the vent opening, the adhesive closure being removable to allow excess

flatus gas to be vented from the bag.

In one embodiment, the adhesive closure is present as an auxiliary means of releasing excess flatus gas, the primary mean for venting gas being defined by an opening covered by a filter. Thus, the ostomy bag can have a first flatus gas vent opening covered by a filter element, and a second flatus gas vent opening closed by the removable adhesive closure.

The removable adhesive closure can be substantially gas-permeable and can, for example, be formed from a similar material to the ostomy bag wall, or a different material. In one alternative embodiment, however, the removable adhesive closure can take the form of a filter element removably affixed to the bag over the vent opening by means of adhesive. In the latter embodiment, flatus gas would normally be filtered before exiting the bag but in the event of excess flatus gas pressure building up in the bag, the filter can be removed to release the excess pressure, and then replaced again. In this embodiment, the removable closure could constitute the only filtered opening in the bag, or it could serve as an auxiliary filtered opening, for example in combination with a non-removable filter.

The ostomy bag is typically formed from a water-impermeable material which also acts as a barrier to flatus gases. Examples of such materials include polyvinyl chloride (PVC), polyvinyl dichloride (PVDC),ethylene vinyl alcohol, and related materials and combinations thereof. In normal use, the flatus filter permits the egress of gas from the bag but filters out malodorous and noxious gases. Such filters, which can contain activated charcoal for the absorption of malodorous and noxious gases, are well known and need not be described in detail here. However, in the event of a sudden build-up of flatus gas within the bag that cannot be vented quickly enough through the filter to prevent ballooning, the bag user can simply retire to a private area such as a WC and release the excess flatus gas by removing the adhesive closure.

Ostomy bags are typically provided with an orifice for receiving waste products from the stomal opening of a patient. The orifice is surrounded by a means for securing and sealing the bag against the body wall of the patient, and such securing means and sealing usually takes the form of a flange, for example an adhesive flange. Typically, one surface of the flange is provided with a layer of bioadhesive, e.g. a hydrocolloid adhesive, which enables the bag to be affixed to the body wall of a patient about the stomal opening.

The flatus gas vent openings are typically located towards the upper end of the bag, and preferably above the adhesive flange. In this way, contact between the openings and the contents of the bag is minimised, thereby preventing leakage and/or fouling of the filter.

The adhesive closure for the flatus gas vent opening can comprise a flexible covering member (for example in the form of a disc) which is removably adhered to the ostomy bag wall about the vent opening. The covering member is preferably flexible and may be provided with a tab to assist removal. Alternatively, the covering member may of stiffer construction and can, for example, comprise a filter element.

Either the covering member or a region (the bonding region) of the ostomy bag wall surrounding the vent opening, or both, can be provided with a layer of adhesive. The adhesive can take the form of a polymeric (e.g. polyester) tape or film having one side coated with a permanent or high tack adhesive such as a rubber-based adhesive, and the other side covered by a peelable adhesive such as an acrylic adhesive.

In one preferred embodiment of the invention, the covering member is provided with an adhesive layer.

The invention will now be illustrated by way of example with reference to

the non-limiting specific embodiment shown in the accompanying drawings.

Brief description of the Drawings

Figure 1 is schematic view from one side (referred to hereinafter as "the front surface") of an ostomy bag according to one embodiment of the invention in which an adhesive cover is shown detached from the vent opening.

Figure 2 corresponds to Figure 1 except that the adhesive cover is shown in a closed position.

Detailed Description of the Preferred Embodiment

According to one embodiment of the invention as shown in Figures 1 and 2, an ostomy bag 2 is formed from sheets of waterproof, gas impermeable material welded together around their respective peripheral margins 4 in conventional fashion. Suitable materials for use in constructing the bag include polyvinyl chloride (PVC), polyvinyl dichloride (PVDC),ethylene vinyl alcohol, and laminates formed from such materials. Such materials are conventional and need not be discussed in detail here.

The rear (bodyside) surface of the bag is provided with an orifice (represented by dotted line 8) through which waste products from a patient's stomal opening enter the bag. The orifice 8 is surrounded by an adhesive flange 6 (the inner and outer edges of which are indicated by means of dashed lines 10a and 10b) which is of conventional construction.

On the front surface 12 of the bag, and disposed above the level of the adhesive flange 10a/10b on the rear surface of the bag, are first and second flatus gas vent openings 14, 16. The flatus gas vent opening 14 is covered by flatus filter 18 of conventional type which in this embodiment is retained in a circular pocket (not shown) bonded to the inner surface of the bag wall and conveniently takes the form of a circle of carbon cloth. The inner surface of the pocket (not shown) is perforated to allow gas to pass from the interior of the bag through the filter 18 and

out through opening 14. Gas vent opening 16 is surrounded by a circular region 26 which may simply be a continuation of the wall 12 of the bag, or may be a circular weld region formed by applying a welding tool to a comfort layer (not shown) overlaying the wall 12 of the bag. When a comfort layer is present, this is typically formed from a non-woven material which is not gas-impermeable and is a poor substrate for an adhesive bond. By applying a welding tool to the comfort layer, not only is the comfort layer welded to the underlying wall 12 but also the rough irregular surface of the comfort layer is flattened to provide a smooth substrate for an adhesive bond.

Connected to the bag via connection piece 20 is a closure member 22 in the form of a disc formed from the same material as the bag wall. Connecting piece 20 is sandwiched between the front and rear sheets of the ostomy bag and is secured in place by welding along peripheral welding line 4. The disc 22 is provided with a layer 24 of double sided adhesive that enables the disc to be releasably bonded to the bonding region 26 surrounding the opening 16. A tab 28 provides a means of manipulating the closure member 22.

In Figure 1 the adhesive closure member 22 is shown detached from the bonding region 26 surrounding the opening 16, whereas in Figure 2 the adhesive closure member 22 is shown in a closed figuration.

In use, flatus gases will normally pass out through the filtered opening 14 thereby preventing release of unpleasant odours into the atmosphere. In the event in a sudden increase in flatus gas pressure, the patient can simply retreat to the nearest bathroom, and release the adhesive cover 22 to deflate the bag. Thus, the bag of the invention provides a means of rapidly releasing excessive flatus gas without the need for disengaging the ostomy bag from the stomal area.

The ostomy bag illustrated in the drawings is a non-drainable bag, of a type typically used for colostomy patients. It will be appreciated however that the bag

could equally be of the draining variety.

It will be readily apparent that numerous modifications and alterations can be made to the ostomy bag shown in the accompanying drawings without departing from the principals underlying this invention, and all such modifications and alterations are intended to be embraced by this application.

CLAIMS

1. An ostomy bag provided with a vent opening at or towards an upper end thereof and an adhesive closure removably covering the vent opening, the adhesive closure being removable to allow excess flatus gas to be vented from the bag.

2. An ostomy bag according to claim 1 wherein the adhesive closure is present as an auxiliary means of releasing excess flatus gas, a primary means for venting gas being provided by an opening covered by a filter.

3. An ostomy bag according to claim 1 or claim 2 wherein the said vent opening is located towards the upper end of the bag, and above an orifice for receiving stomal waste.

4. An ostomy bag according to any one of the preceding claims wherein the adhesive closure comprises a flexible covering member (for example in the form of a disc) which is removably adhered to the ostomy bag wall about the vent opening.

5. An ostomy bag according to claim 4 wherein the flexible covering member is provided with a tab to assist removal.

6. An ostomy bag according to claim 1 wherein the adhesive closure comprises a covering member which is removably adhered to the ostomy bag wall about the vent opening, the covering member comprising a filter element.

7. An ostomy bag substantially as described herein with reference to the accompanying drawings.

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Application No:	GB 0023313.0	**Examiner:**	Susan Chalmers (Mrs)
Claims searched:	1-7	**Date of search:**	5 March 2001

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.S): -

Int Cl (Ed.7): A61F: 5/441, 5/445

Other: ONLINE: EPODOC, WPI, JAPIO

Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
X	EP 0985390 A	(BRISTOL-MYERS SQUIBB) see sticker 32 in Figures 1,3,7-12 and column 1 lines 27-45	1,3-5
X	EP 0564106 A	(SMITHS INDUSTRIES) see filter 50 and adhesive area 34, column 3 line 48 to column 4 line 7 and column 4 line 21 to column 5 line 8	1,3-6
X	EP 0535801 A	(SMITHS INDUSTRIES) see Figures 2 and 3 and column 3 line 42 to column 4 line 12 and column 4 line 47-52	1-5
X	US 5085652	(JOHNSON) see Figures 1-5 and column 6 lines 3-26	1,4-6
X	US 4938750	(LEISE) see Figures	1,4,5
X	US 4723951	(STEER) see Figure 1 and column 3 lines 19-60	1,3-6
X	US 4490145	(CAMPBELL) see Figures and column 2 line 63 to column 3 line 8	1,3-5

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.