An ostomy bag with a gas vent and filter

An ostomy bag 10 comprises first and second walls 12 and 14 connected to each other at their peripheries, wherein the first wall 12 has a stoma-receiving opening 20. An intermediate wall 16 is provided between the first and second walls, connected at its periphery to at least one of the first or second walls thereby providing a first chamber 24 and a second chamber 26. The intermediate wall has a first gas vent 28 to allow gas to pass from the first to the second chambers and the second wall has a second gas vent 30 with a gas filter 32 located between a centre line (21 figure 1) of the stoma-receiving opening 20 and a bottom of the bag. The first gas vent may be a permeable membrane with the ostomy bag having an opening at its bottom to allow its contents to be drained A region of the first wall surrounding the stoma-receiving opening may have a means 22 to fix the ostomy bag to the wearer's skin. The walls may be made from a thermoplastic material connected at their peripheries by a weld (18 figure 18), also the ostomy bag may be provided with a covering layer to enhance the wearer's comfort.
PATENTS ACT 1977
A11098GB
Title: Ostomy Bag

Description of Invention

This invention relates to an ostomy bag, and in particular to an ostomy bag having a gas filter.

According to the present invention there is provided an ostomy bag having a top and bottom and including:-

first and second walls connected to each other at or near their peripheries, the first wall having a stoma-receiving opening;

an intermediate wall provided between the first and second walls and connected at or near its periphery to at least one of the first or second walls to provide a first chamber between the first wall and the intermediate wall and a second chamber between the second wall and the intermediate wall;

a first gas vent provided in the intermediate wall to allow passage of gas between the first and second chambers; and

a second gas vent, including a gas filter, provided in the second wall between a centre line of the stoma-receiving opening and the bottom of the bag.

The provision of the second gas vent, and its filter, in the second wall between the centre line of the stoma-receiving opening and the bottom of the bag removes weight from the top of the bag. This ensures that the top of the bag does not hang away from the wearer’s skin, which would make the ostomy bag more noticeable, for example through clothing, which is highly undesirable. Also, the provision of the second gas vent, and its filter, in the second wall allows easier access for it to be blocked by the wearer, if required.

The second gas vent and its filter may be provided between a lower periphery of the stoma-receiving opening and the bottom of the bag.

The first gas vent in the intermediate wall may be provided between the centre line of the stoma-receiving opening and the top of the bag. There may
be provided more than one first gas vent, such as, for example, two first gas vents spaced laterally from each other. The first gas vent in the intermediate wall may be provided between an upper periphery of the stoma-receiving opening and the top of the bag.

The first gas vent(s) may be an aperture in the intermediate wall or an incision, such as an “S” shaped incision.

The first gas vent(s) may include a gas permeable membrane, such as a microporous membrane.

A part of the intermediate wall adjacent the first gas vent(s) may be connected to the first wall. This ensures that when the bag fills, gases are free to flow through the first gas vent(s).

The ostomy bag may have an opening at its bottom to allow any contents therein to be drained by a wearer (commonly known as an ileostomy bag), and preferably closure means is provided to seal the opening.

Alternatively, the bottom of the ostomy bag may be sealed, i.e. for single use (commonly known as a colostomy bag).

A region of the first wall surrounding the stoma-receiving opening may be provided with means to fix it to a wearer’s skin. The fixing means may be an adhesive or coupling means. The coupling means may have a first coupling member connectable to the wearer’s skin and a second coupling member connected to the first wall, with the first and second coupling member releasably connectable to each other. This permits a used ostomy bag to be removed and a new one connected.

The first and second walls may each be provided with a covering layer to enhance wearer comfort. The provision of the covering layers avoids the possibility of the ostomy bag sticky or clinging to the wearer’s skin and/or clothing.

The first, second and intermediate walls and the covering layers may be made from a thermoplastic material.
The first and second walls may be connected to each other by welding. Also, the intermediate wall may be connected to the first or second wall by welding.

The covering layers may also be welded to the first and second walls, respectively.

The invention will now be described by way of example only with reference to the accompanying drawings, in which:-

Figure 1 is front view of a first embodiment of an ostomy bag in accordance with the present invention in an upright orientation;

Figure 2 is a side cross-sectional view of the ostomy bag of figure 1;

Figure 3 is a top cross-sectional view of the ostomy bag of figure 2;

Figure 4 is front view of a second embodiment of an ostomy bag in accordance with the present invention in an upright orientation;

Figure 5 is a side cross-sectional view of the ostomy bag of figure 4; and

Figure 6 is a top cross-sectional view of the ostomy bag of figure 4.

Referring firstly to figures 1 to 3 there is shown an ostomy bag in accordance with the present invention, generally at 10, having a top and a bottom. The bag 10 has a first wall 12 which in use lies against a wearer’s skin, a second wall 14 and an intermediate wall 16 between the first and second walls 12, 14. The walls 12, 14, 16 are each manufactured of a thermoplastic material and are connected to each other at their peripheries by a weld, indicated at 18, to form the bag 10. This form of bag 10, which is not drainable, is commonly known as a colostomy bag.

The first wall 12 has a stoma-receiving opening indicated at 20 and is also provided with fixing means 22 to fix the bag 10 to a stoma of the wearer. Such fixing means 22 is well known in the art and does not form part of the present invention and therefore will not be described herein.

The first wall 12 and the intermediate wall 16 define a first chamber 24 and the second wall 14 and the intermediate wall 16 define a second chamber
26. The first chamber 24, in use, receives and stores waste from the stoma until it is full at which time the bag 10 is removed and discarded and a new bag 10 fitted.

The intermediate wall 16 is provided with a first gas vent in the form of an "S" shaped incision 28 in the intermediate wall 16. The incision 28 is provided between the centre line 21 of the stoma-receiving opening 20 and the top of the bag 10, which ensures that it does not get blocked with waste from the stoma. The incision 28 could for example be provided between an upper periphery of the stoma-receiving opening 20 and the top of the bag 10. The incision 28 should be positioned as near to the weld 18 as possible whilst still being able to function adequately, without getting caught in the weld during manufacture, so as to minimise any risk of blocking. The incision 28 allows passage of gas between the first and second chambers 24, 26.

The second wall 14 is provided with a second gas vent in the form of an aperture 30 in the second wall 14. The aperture 30 is provided between a centre line 21 of the stoma-receiving opening 20 and the bottom of the bag 10 and is covered by a gas filter 32 to filter out any unwanted odours. Thus any gases which are given off from the waste from the stoma travel from the first chamber 24, through the incision 28, into the second chamber 26 and out through the aperture 30 and the filter 32 to atmosphere.

Referring now to figures 4 to 6, these show a second embodiment of an ostomy bag in accordance with the present invention, generally at 100, having a top and a bottom.

The bag 100 has a first wall 112 which in use lies against a wearer's skin, a second wall 114 and an intermediate wall 116 between the first and second walls 112, 114. The walls 112, 114, 116 are each manufactured of a thermoplastic material and are connected to each other at their peripheries by a weld, indicated at 118, to form the bag 100. However, a portion of the bottom of the bag 100 has an opening 119 to allow any contents therein to be emptied.
The opening 119 can be sealed by closure means (not shown), which is well known in the art and does not form part of the present invention and therefore will not be described herein. This form of bag 100, which is drainable, is commonly known as an ileostomy bag.

The first wall 112 has a stoma-receiving opening indicated at 120 and is also provided with fixing means 122 to fix the bag 100 to a stoma of the wearer.

The first wall 112 and the intermediate wall 116 define a first chamber 124 and the second wall 114 and the intermediate wall 116 define a second chamber 126. The first chamber 124, in use, receives and stores waste from the stoma until it is full at which time it can be emptied through the opening 119, or replaced with a fresh bag 110 as appropriate.

The intermediate wall 116 is provided with a pair of first gas vents in the form of apertures 140 in the intermediate wall 116, each covered by a gas permeable hydrophobic membrane 142, such as, for example, a microporous membrane. The apertures 140 are provided between a centre line 121 of the stoma-receiving opening 120 and the top of the bag 110 and are laterally spaced from each other at opposite sides of the stoma-receiving opening 120, more particularly, the apertures 140 are provided between an upper periphery of the stoma-receiving opening 120 and the top of the bag 110. The positioning of the apertures 140 between the stoma-receiving opening 120 and the top of the bag 100 ensures that they do not get blocked with waste from the stoma. The apertures 140 allow passage of gas between the first and second chambers 124, 126.

A part of the intermediate wall 116 between the apertures 140 is connected to the first wall 112 by, for example, an adhesive 150. This has been found to ensure that when the bag 100 fills with waste from the stoma, the first wall 112 and the intermediate wall 116 are spaced from each other in the area
of the apertures 140 so that gases given off from the waste from the stoma are free to flow through the apertures 140 and into the second chamber 126.

The second wall 114 is provided with a second gas vent in the form of an aperture 130 in the second wall 114. The aperture 130 is provided between the stoma-receiving opening 120 and the bottom of the bag 100 and is covered by a gas filter 132 to filter out any unwanted odours. Thus any gases which are given off from the waste from the stoma travel from the first chamber 124, through the apertures 140 and their respective membranes 142, into the second chamber 126 and out through the aperture 130 and the filter 132 to atmosphere.

Although the apertures 30, 130 and their respective filters 32, 132 are spaced well below the centre line of the stoma-receiving opening 20, 120 and to one side thereof, it is possible to provide them at any position on the second wall 12, 112 so long as they are between the centre line of the stoma-receiving opening 20, 120 and the bottom of the bag 10, 100. Also, it is within the scope of the present invention to provide more than one gas vent in the second wall 12, 112, such as, for example, two gas vents spaced laterally from each other.

There may be provided two or more apertures or incisions 28 in the intermediate wall 16. Similarly there may be provided any number of apertures 140, with respective membranes 142, in the intermediate wall 116.

The first and second walls 12, 112, 14, 114 may also each be provided with a covering layer to enhance wearer comfort so as to avoid the possibility of the bag 10, 100 sticking or clinging to the wearer’s skin and/or clothing.

When used in this specification and claims, the terms "comprises" and "comprising" and variations thereof mean that the specified features, steps or integers are included. The terms are not to be interpreted to exclude the presence of other features, steps or components.

The features disclosed in the foregoing description, or the following claims, or the accompanying drawings, expressed in their specific forms or in terms of a means for performing the disclosed function, or a method or process
for attaining the disclosed result, as appropriate, may, separately, or in any combination of such features, be utilised for realising the invention in diverse forms thereof.
CLAIMS

1. An ostomy bag having a top and bottom and including:
   first and second walls connected to each other at or near their
   peripheries, the first wall having a stoma-receiving opening;
   an intermediate wall provided between the first and second walls and
   connected at or near its periphery to at least one of the first or second walls to
   provide a first chamber between the first wall and the intermediate wall and a
   second chamber between the second wall and the intermediate wall;
   a first gas vent provided in the intermediate wall to allow passage of gas
   between the first and second chambers; and
   a second gas vent, including a gas filter, provided in the second wall
   between a centre line of the stoma-receiving opening and the bottom of the bag.

2. An ostomy bag according to claim 1 wherein the second gas vent and its
   filter are provided between a lower periphery of the stoma-receiving opening
   and the bottom of the bag.

3. An ostomy bag according to claim 1 or claim 2 wherein the first gas vent
   in the intermediate wall is provided between the centre line of the stoma-
   receiving opening and the top of the bag.

4. An ostomy bag according to any preceding claim wherein the first gas
   vent in the intermediate wall is provided between an upper periphery of the
   stoma-receiving opening and the top of the bag.

5. An ostomy bag according any preceding claim wherein the first gas vent
   is an aperture in the intermediate wall.
6. An ostomy bag according any preceding claim wherein the first gas vent includes a gas permeable membrane.

7. An ostomy bag according any preceding claim wherein a part of the intermediate wall adjacent the first gas vent is connected to the first wall.

8. An ostomy bag according any preceding claim wherein the ostomy bag has an opening at its bottom to allow any contents therein to be drained by a wearer.

9. An ostomy bag according any one of claims 1 to 7 wherein the bottom of the ostomy bag is sealed.

10. An ostomy bag according any preceding claim wherein a region of the first wall surrounding the stoma-receiving opening is provided with means to fix it to a wearer’s skin.

11. An ostomy bag according any preceding claim wherein the first and second walls are each provided with a covering layer to enhance wearer comfort.

12. An ostomy bag substantially as hereinbefore described with reference to and as shown in the accompanying drawings.

13. Any novel feature or novel combination of features described herein and/or in the accompanying drawings.
Application No: GB0408483.6  Examiner: Mr Haydn Gupwell
Claims searched: 1-11  Date of search: 31 August 2004

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

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