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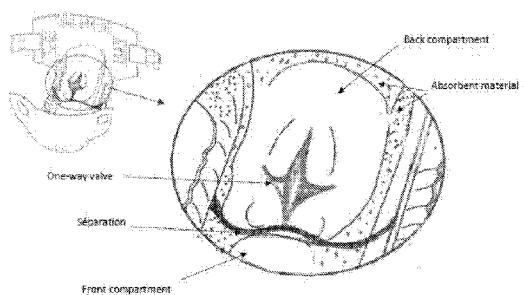


FIG. 5

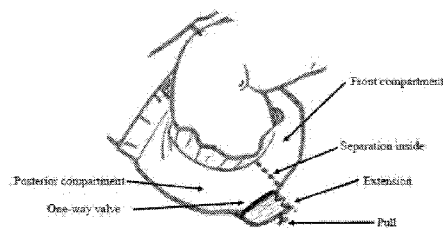


FIG. 6

FIG. 6

(57) Abstract: The disposable septic diaper is an improvement on the standard diaper available to both children and adults who need to wear diapers. The disposable septic diaper adds a separation to divide the diaper's bowl into two compartments with a waterproof seal that runs across the middle of the inner portion of the diaper. This separation prevents liquid waste from mixing with solid waste. The back portion of the diaper has an opening with a one-way valve which lets the solid waste slide into an extended closed room (the extension). The extension of the diaper is located directly below the valve. This portion will provide more space for the feces and will keep it far from the skin.



DISPOSABLE SEPTIC DIAPER

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0001] The present invention relates generally to the field of diapers and more specifically relates to chambered diapers.

2. Description of the Related Art

[0002] Any parent will know that cleaning up after a child can be quite difficult, and changing their diaper is no exception. Though diapers have made improvements over the last several decades, which include better absorption and a better seal around the legs to prevent leaking, there are still several problems with current diaper design when it comes to the comfort of the person wearing the diaper. If there are mixed substances of both urine and feces in the diaper, it can be difficult to contain this mixture of both liquid and solid waste. Another major problem is the skin irritation this can cause in both children and adults who need to wear diapers.

[0003] There have been numerous attempts to create the most efficient diaper possible that will allow for absorption, comfort and sealing. One such invention is a diaper having a pouch for the collection of waste, which has an opening mechanism. However, even though many advancements have been made in the categories of absorption and sealing, there is still room for improvement in the comfort area.

[0004] Various attempts have been made to solve the problems which may be found in the related art but have thus far been unsuccessful. A need exists for a reliable disposable septic diaper to avoid the above-mentioned problems.

BRIEF SUMMARY OF THE INVENTION

[0005] In view of the foregoing disadvantages inherent in the known art, the present invention provides a novel disposable septic diaper. The general purpose of the present invention, which will be described subsequently in greater detail, is to provide a more efficient and comfortable diaper experience by allowing for the separation of liquid and solid waste into different areas of the diaper, thus preventing their mixture and the creation of messes that can result from this mixture.

[0006] The disposable septic diaper may be comprised of a separation in the bowl of the diaper, and an expandable room extension in the back compartment to provide more space for the solid waste. Human genitals and anuses have exit points that face nearly opposite directions with an exit angle larger than fifty-five degrees. This may allow for the separation of the solid and liquid waste by adding a separation and adapting the two septic containers to the type of waste received.

[0007] The solid waste container has an additional extendible and waterproof compartment called “extension” at the back of the diaper, allowing more space and doubling the insulation. The extendable waterproof extension may be spatially related to the septic back-compartment by a one-way valve that leaves the solid waste immersed in the waterproof extension, not allowing the solid waste to resurface.

[0008] The features of the invention which are believed to be novel are particularly pointed out in the specification. The present invention now will be described more fully hereinafter with reference to the accompanying drawings, which are intended to be read in conjunction

with both this summary, the detailed description and any preferred and/or particular embodiments specifically discussed or otherwise disclosed. This invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein; rather, these embodiments are provided by way of illustration only and so that this disclosure will be thorough, complete and will fully convey the full scope of the invention to those skilled in the art.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] The figures which accompany the written portion of this specification illustrate embodiments and method(s) of use for the present invention, disposable septic diaper, constructed and operative according to the teachings of the present invention.

[0010] **FIG. 1** shows a top down view of the disposable septic diaper in an open position, as well as the entrance of the extension through the one-way valve from above.

[0011] **FIG. 2** shows an upright backside external view of the disposable septic diaper with the extension compressed inside as it comes from the package, and shows the way it opens to receive the feces.

[0012] **FIG. 3** shows a top down view of the actual diaper in an open position in which the bowl and separation can be seen.

[0013] **FIG. 4** shows a close up cross section of the one-way valve functionality between the feces compartment and the extension.

[0014] **FIG. 5** shows a close-up view of the one-way valve opening and its location in the disposable septic diaper as well as the separation from the front portion.

[0015] **FIG. 6** shows a close-side view of the septic diaper with all the innovations on it.; the separation, the one-way valve and the extension.

[0016] The various embodiments of the present invention will hereinafter be described in conjunction with the appended drawings.

DETAILED DESCRIPTION

[0017] As discussed above, embodiments of the present invention relate to a diaper device and more particularly to a new addition to a traditional diaper that can more efficiently collect the waste in a child or adult-sized diaper.

[0018] Referring now to the drawings **FIGS. 1 - 5**, **FIG. 1** shows the disposable septic diaper from above, in an open position, with the separation of the front liquid and back solid waste containers in view. Additionally, the one-way valve entrance to the extension for solid waste disposal is visible.

[0019] Referring now to **FIG. 2** the disposable septic diaper in a closed position, upright and from the back. The opening for the extension meant for containing solid waste can be seen as well as an indicator that may show whether or not the container is full.

[0020] Referring now to **FIG. 3** which shows a top down view of the disposable septic diaper in an open position. The bowl of the diaper can be seen, as well as the separation from the front liquid and back solid waste containment areas.

[0021] Referring now to **FIG. 4** which shows a close up cross section of the one-way valve which acts as the entrance to the separate containment area for solid waste at the back of the disposable septic diaper. The one-way valve is shown in both an open and closed state.

[0022] Referring now to **FIG. 5** which shows a zoomed in view of the separation from the front liquid area and the back solid area as well as the one-way valve opening that may

allow for the solid waste to be deposited into the extension at the back of the disposable septic diaper.

[0023] The unique features of this invention may provide the following benefits for all consumers: a more efficient and comfortable diaper for use by both children and adults. The typical diaper is meant to contain solid and liquid waste, but does not have an effective way to separate the two types of waste from mixing and causing huge messes as well as skin irritation in the child or adult wearing the diaper. The disposable septic diaper improves upon the design of the diaper by adding several new functions and structures.

[0024] The first of these new features is a separation, which is added to the bowl of the diaper. This separation creates two compartments in the diaper. This separation may allow for the containment of liquid waste in the front portion of the diaper and solid waste in the back portion. The separation can be made from the same material used in the sides for the sealing or can be manufactured with another waterproof material or a material to keep the two compartments isolated. The separation goes across the full length of the bottom portion of the inside of the diaper from one leg to the other, to create the two separate compartments. The shape of the separation does not have limits: it can be in a zigzagged shape, straight, elastic, etc. The most important function is that the separation will not allow the urine to pass to the feces compartment, and vice versa, and it will be sufficiently high, up to reaching the skin of the user, for a high-quality insulation.

[0025] The second feature will be the addition of an extended compartment (extension) located below the feces compartment, which is accessed by a one-way valve. The compartment may also have an absorbing material in case of diarrhea but it will not be as absorbing as the frontal compartment as there is less likely to be much liquid in the back area. The compartment may have an indicator to show when it is full as well as to create a different shape when the compartment is full. Since the diaper will arrive to the user squeezed in the package, the extension will be pressed as well. Once the diaper is on the user, we will need to pull out the extension a little bit and the feces will do the rest (Fig 6 and Fig 4). The extension compartment, can be varied in shape, volume or the way it opens. This can be adapted to the fit according to need and age/weight. The invention insists on the diaper's function, novelty and service.

[0026] The third feature will be the one-way valve located between the feces compartment and the extended compartment called the extension. The one-way valve will hold the solid waste once it passes to the extension and ensure that it does not go back to cause skin irritation or a large mess for the diaper user. (Fig 4) . My research shows that children, 12 months or older, defecate in a standing position 90% of the time.

[0027] The exact shapes, materials used, and method of use of the disposable septic diaper may vary upon manufacturing.

[0028] The embodiments of the invention described herein are exemplary and numerous modifications, variations and rearrangements can be readily envisioned to achieve substantially equivalent results, all of which are intended to be embraced within the spirit and scope of the invention. Further, the purpose of the foregoing abstract is to enable the

U.S. Patent and Trademark Office and the public generally, and especially the scientist, engineers and practitioners in the art who are not familiar with patent or legal terms or phraseology, to determine quickly from a cursory inspection the nature and essence of the technical disclosure of the application.

CLAIMS

What is claimed is new and desired to be protected by Letters Patent or the PCT patent, is set forth in the appended claims:

1. A disposable septic diaper with a new design and functionality to provide a more efficient and comfortable diaper that has separate liquid and solid waste containment areas to allow for easier cleanup, less skin irritation, and more use-durability as described herein.
2. A waterproof separation in the bowl of the diaper with a necessary height (possibly reaching the user's skin) located between the penis/vagina and the anus; in order to keep the liquid and solid wastes separate.
3. Two containers created by the separation in the diaper bowl, one container in the front to receive the urine and another one in the back to receive the feces.
4. The urine compartment located in the front will have the most sponge material to absorb the liquid. It can be extended under the separation and be present in the feces compartment to allow for more absorbing surface.
5. An extension in the base of the feces bowl. This extension has an entrance from the bowl to provide more space and to avoid skin contact with the feces.
6. A one-way valve at the opening between the back-bowl and the extension to let the feces descend and not allow it to return to the bowl.
7. A puller to pull the extension once the diaper is on the baby, child or adult since the diaper will arrive squeezed in the package.

8. *A transparent indicator* added to the extension to show if there's any feces content in the extension.
9. The name of the present invention, which is '**Disposable Septic Diaper**'.

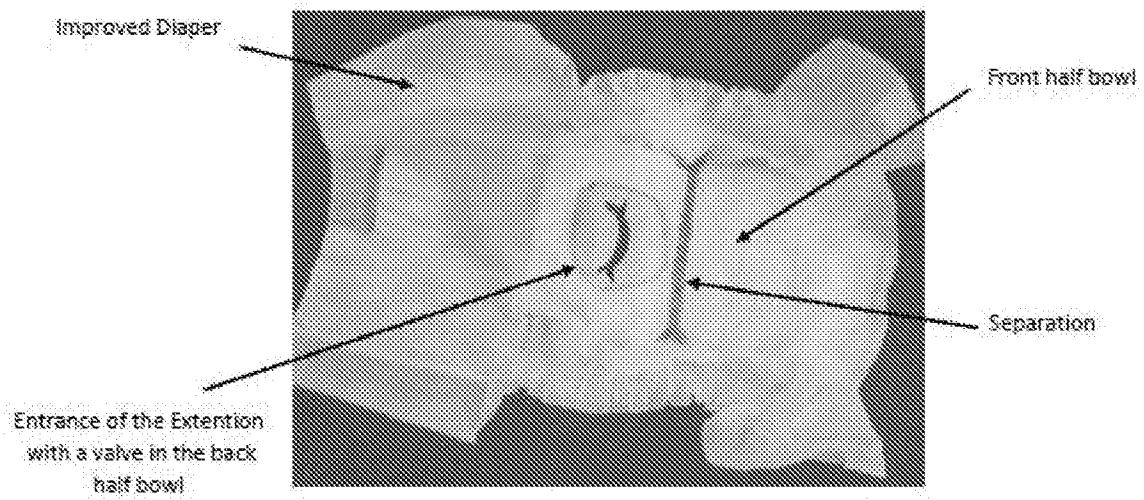


FIG. 1

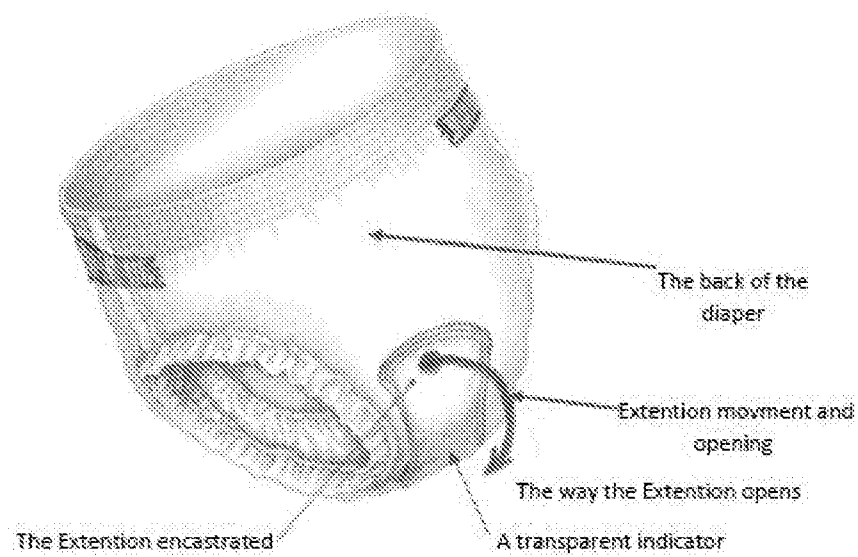


FIG. 2

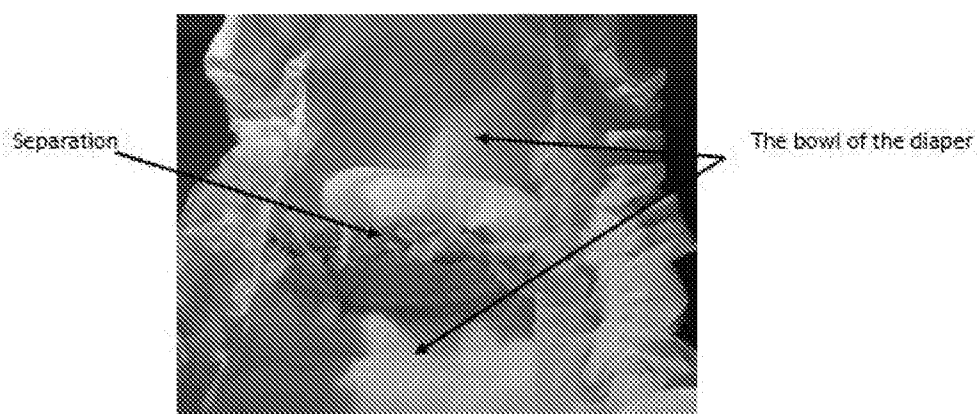


FIG. 3

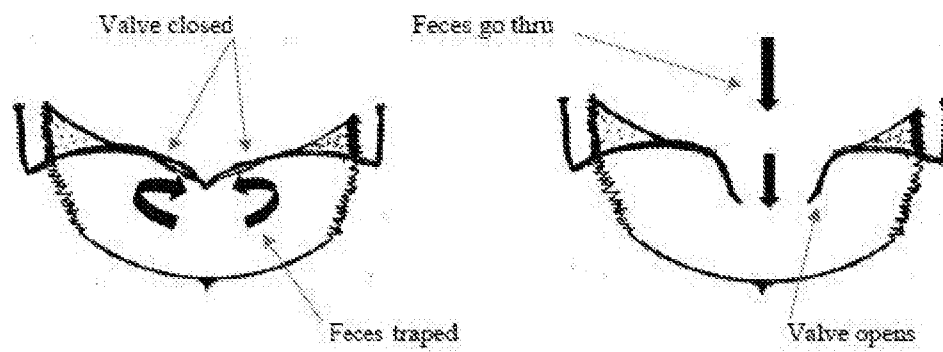


FIG. 4

FIG. 4

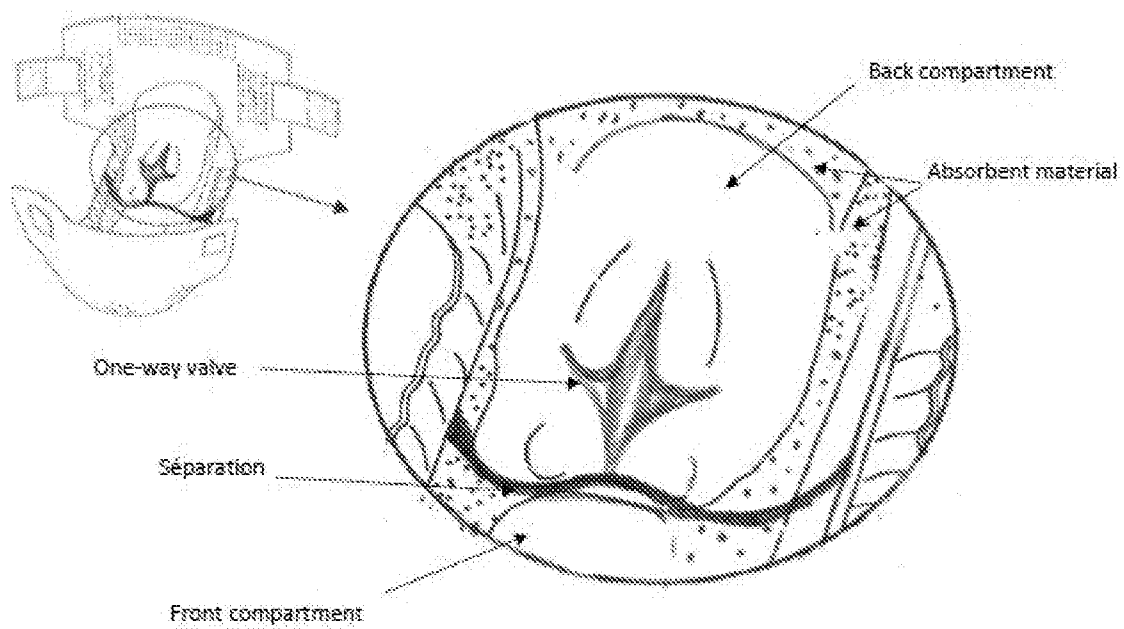


FIG. 5

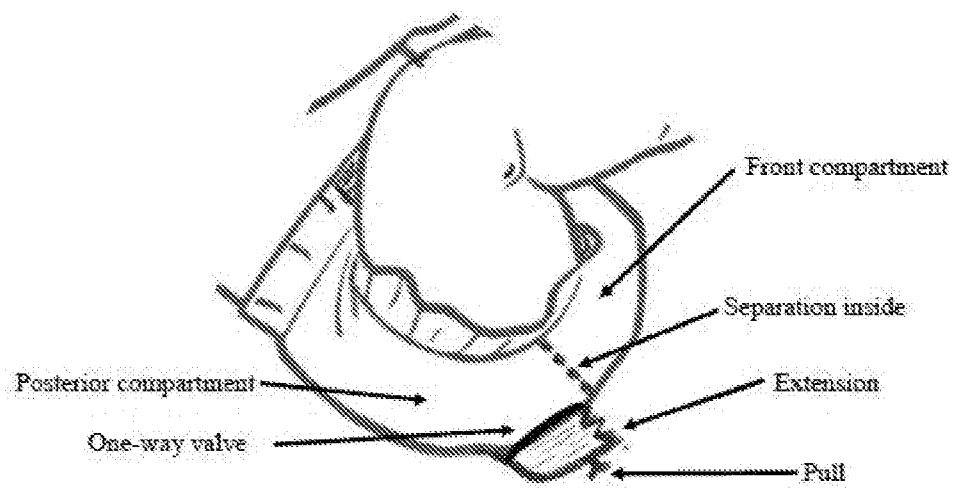


FIG. 6

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