PORTABLE CHANGING PAD, SYSTEM AND DISPENSER

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Abstract
A changing pad dispenser is provided for convenient dispensing of infant changing pads. A plurality of changing pads are provided in an assembly that permits storage and serial dispensing from the dispenser. Further provided is a changing pad dispenser that includes a dispenser for dispensing of wipes.
PORTABLE CHANGING PAD, SYSTEM AND DISPENSER

[0001] This application is based upon and claims benefit of Provisional patent application Ser. No. 60/810,333, filed Jun. 2, 2006.

FIELD OF THE INVENTION

[0002] The invention relates to a portable changing pad, changing pad system, arrangement and dispenser.

BACKGROUND OF THE INVENTION

[0003] Carrying items for infant care during travel can be cumbersome and unwieldy. In particular, changing diapers in public areas is a challenge as many changing areas are unsanitary, changing pads and associated cleaning materials consume space in luggage, and disposing of dirty diapers and such can be highly inconvenient.

[0004] Some attempts have been made at making it easier to travel with infants. Some disposable changing pads exist. However, these pads are not always easily accessible and are either bulky or too small to cover a substantial area where the infant is being changed. Such changing pads are not convenient for packing, storing and dispensing and/or are not useful for extended periods of time during which multiple changes may occur.

[0005] A diaper has been proposed with a built-in pocket for a wipe and a changing pad attached. This device requires that the infant wear the changing pad and wipe. Also these devices do not provide easy dispensing and storage of baby changing articles for travel.

[0006] Accordingly, it would be desirable to provide less cumbersome and more convenient devices and methods for changing and cleaning infants and in particular for travel with infants.

SUMMARY OF THE INVENTION

[0007] The invention provides devices and methods as set forth in the description, drawings and claims herein.

[0008] An exemplary aspect of the invention provides a plurality of changing pads that may be easily dispensed from a changing pad dispenser.

[0009] Another exemplary aspect of the invention provides a changing pad and infant wipe dispenser that provides for separate storage and dispensing of a plurality of changing pads and a plurality of wipes that may be conveniently carried and may be useful, for example, when traveling with an infant.

[0010] Another exemplary aspect of the invention provides a disposable changing pad that is configured to contain dirty diapers, wipes and other matter after changing pad use. In addition, the changing pad may be configured to be conveniently carried by the user with such matter after use.

DETAILED DESCRIPTION OF THE DRAWINGS

[0011] FIG. 1 is a perspective view of a dispensing system in accordance with the invention.

[0012] FIG. 2 is an exploded perspective view of a dispensing system in accordance with the invention.

[0013] FIG. 3 is a schematic top view of a changing pad in accordance with the invention.

[0014] FIG. 4 is an exploded schematic view of a changing pad assembly in accordance with the invention.

[0015] FIG. 5 an exploded perspective view of a dispensing system in accordance with the invention.

[0016] FIG. 6 an exploded perspective view of a dispensing system in accordance with the invention.

[0017] FIG. 7A an exploded perspective view of a dispensing system in accordance with the invention.

[0018] FIG. 7B is a perspective view of the bottom of the dispensing system of FIG. 7A.

DETAILED DESCRIPTION OF THE INVENTION

[0019] In accordance with the invention, a dispenser 100 is provided having a first compartment 110 configured to contain a plurality of wipes, and a second compartment 120 configured to contain a plurality of changing pads. First compartment 110 and second compartment 120 defined by an outer wall portion 111, 121 respectively and at least one inner separator positioned between the first compartment and second compartment. As illustrated in FIGS. 1 and 2, a plurality of separators 112 and 122 are provided between the first compartment 110 and the second compartment 120 wherein the separator 112 has an inner wall 112α further defining compartment 110 and separator 122 has an inner wall 122α further defining compartment 120. The first compartment 110, second compartment 120 and separators 112, 122 are hingedly coupled to each other at one side 101 of the dispenser so that the first and second compartments are rotatably separable with respect to each other. Also the separators 112, 122 may be rotated with respect to compartments 110, 120 respectively, so that compartments 110, 120 may be accessed by respectively rotating separators 112, 122 away from compartments 110, 120. Thus the compartments 110, 120 may be opened to insert refills. In addition, separators 112, 122 respectively comprise an access opening 114, 124 for withdrawing individual wipes and/or changing pads from respective compartments 110, 120. Each of the separators 110, 120 have interfacing surfaces 118, 128 respectively that are fitted with each other to reduce space between the separators. Separator 112 includes a mating or sealing element 115 that is configured to mate or interact with mating or sealing element 126 to prevent moisture or other material from entering into the compartment 120 through the access opening 124 when the separators are closed together. Similarly, separator 122 includes a mating or sealing element 125 that is configured to mate or interact with mating or sealing element 116 to prevent moisture or other material from entering into the chamber 110 through the access opening 114 when the separators are closed together. Mating or sealing elements 115, 125 are shown as ridge protrusions that interact with indented surfaces 127, 117 of an opposing separator. However other mating or sealing arrangements are contemplated where the interfacing surfaces 118, 128 are configured to prevent or reduce the amount of moisture from one chamber from entering the other chamber and/or to prevent the pre-moistened wipes from drying.

[0020] One or more of the compartments 110, 120 are configured to receive and dispense a plurality of infant wipes
that are interleaved or separably attached (e.g., with serrations between wipes) for dispensing. Such wipes and wipe refills are commercially available.

[0021] One or more compartments 110, 120 are configured to receive and dispense a plurality of changing pads in accordance with the invention. An example of such changing pad and changing pad assembly are described herein with reference to FIGS. 3 and 4.

[0022] FIG. 3 illustrates a changing pad 200 in accordance with the invention is illustrated. The changing pad 200 comprises a first thin water resistant sheet 210 formed of material such as a plastic. Adhesive strips 220 with removable backings are coupled to the back side of the changing pad 200. The adhesive strips 220 are positioned across the corners but may be in other configurations as well. An absorbent pad 235 is coupled to the front of the changing pad 200. A drawstring 230 is heat-sealed around the periphery of the water resistant sheet 210. The drawstring 230 may be used to cinch the changing pad 200 closed after use for easy disposal of used diapers, wipes or other items. The sheet 210 of the changing pads 200 includes lengthwise folds 240 that permit the sheet 210 to fold over the absorbent pad 235 to protect the changing pad 200 from exposure when stored and when it is initially dispensed. The sheet 210 further comprises widthwise folds 250 that permit accordion-like fold as illustrated in FIG. 3. The widthwise folds 250 and lengthwise folds permit the changing pad 200 to be folded to fit into the changing pad dispenser. The widthwise folds 250 provide generally equal length sections 255 with the exception of end section 256 which is shorter than sections 255. The shorter end section 256 permits interleaving of a plurality of changing pads 200 at end sections 256 and 257 of adjacent changing pads 200 (as illustrated in FIG. 4) that permits serial dispensing of changing pads 200. As a first changing pad 200a is drawn through access opening 114 or 124 (FIGS. 1 and 2) or access opening 525 (FIG. 5) or open compartment 620 (FIG. 6) or access opening 725 (FIG. 7B). The end section 256 of the changing pad may draw end section 256b though the access opening 114, 124, 525, or 725, for subsequent dispensing.

[0023] Referring to FIG. 5, in accordance with the invention, a dispenser 500 is provided having a first compartment 510 configured to contain a plurality of wipes, and a second compartment 520 configured to contain a plurality of changing pads. First compartment 510 and second compartment 520 are defined by an outer wall portion 511, 521 respectively and at least one inner separator positioned between the first compartment and second compartment. Outer wall portion 511 forms top 514 of dispenser 500 which provides access to wipes stored therein. The top 514 includes a cover 516 for covering access opening 515. Cover 516 is coupled to the top 514 with hinge 517 that tends to spring the cover 516 open. The cover 516 further comprises a detent 518 that releasably engages the top 514 so that when engaged, the cover 516 closes the access opening 515 and when released the cover 516 springs open to allow access to the access opening 515. A release button 519 includes a detent mechanism (not shown) that engages detent 518 until the release button is depressed, thereby rotating the detent mechanism away from the detent 518 to release it. The access opening 515 may include a thin plastic 515a having a slit 515b for reaching into the chamber 510 to grasp one or more wipes.

[0024] As illustrated in FIG. 5, a plurality of separators 512 and 522 are provided between the first compartment 510 and the second compartment 520 wherein the separator 512 has an inner wall 512a further defining compartment 510 and separator 522 has an inner wall 522a further defining compartment 520. The first compartment 510, second compartment 520 and separators 512, 522 are hingedly coupled to each other at one side 501 of the dispenser so that the first and second compartments are rotatably separable with respect to each other. Also top 514 may be rotated with respect to separator 512 so that compartment 510 may be accessed to insert wipe refills or to remove wipes. Also the separator 522 may be rotated with respect to bottom 524 so that compartment 520 may be accessed to insert changing pad refills or to remove changing pads.

[0025] In addition, separator 522 comprises an access opening 525 for withdrawing changing pads from compartment 520. The access opening 525 may comprise a thin plastic 525a having a slit 525b for reaching into the chamber 520 to grasp one or more changing pads. The separators 510, 520 may have interfacing surfaces that are fitted with each other to reduce space between the separators. Separator 512 is solid, thus preventing moisture or other material from compartment 510 from entering into the compartment 520 through the access opening 525 when the separators 510, 520 are closed together.

[0026] The compartment 510 is configured to receive and dispense a plurality of infant wipes that are interleaved or separably attached (e.g., with serrations between wipes) for dispensing. Such wipes and wipe refills are commercially available.

[0027] The compartment 520 is configured to receive and dispense a plurality of changing pads in accordance with the invention. An example of such changing pad and changing pad assembly are described herein with reference to FIGS. 3 and 4.

[0028] Referring to FIG. 6, in accordance with the invention, a dispenser 600 is provided having a first compartment 610 configured to contain a plurality of wipes, and a second compartment 620 configured to contain a plurality of changing pads. First compartment 610 is defined by outer wall portion 611 of top 614 and inner separator 622 positioned between the first compartment 610 and second compartment 620. Second compartment 620 is defined by outer wall portion 621 of bottom 624, and inner separator 622.

[0029] Outer wall portion 611 forms top 614 of dispenser 600 which provides access to wipes stored therein. The top 614 includes a cover 616 for covering access opening 615. Cover 616 is coupled to the top 614 with hinge 617 that tends to spring the cover 616 open. The cover 616 further comprises a detent 618 that releasably engages the top 614 so that when engaged, the cover 616 closes the access opening 615 and when released the cover 616 springs open to allow access to the access opening 615. A release button 619 includes a detent mechanism (not shown) that engages detent 618 until the release button is depressed, thereby rotating the detent mechanism away from the detent 618 to release it. The access opening 615 may include a thin plastic 615a having a slit 615b for reaching into the chamber 610 to grasp one or more wipes.

[0030] As illustrated in FIG. 6, a separator 622 is provided between the first compartment 610 and the second compart-
ment 620 wherein the separator 622 has a lower inner wall 622a further defining compartment 620 and an upper inner wall 622b further defining compartment 610. The first compartment 610, second compartment 620 and separator 622 are hingedly coupled to each other at one side 601 of the dispenser so that the top 614, bottom 624 and separator 622 are rotatably separable with respect to each other depending on the desired use. Top 614 may be rotated with respect to separator 622 so that compartment 610 may be accessed to insert wipe refills or to remove wipes. Also the separator 622 may be rotated with respect to bottom 624 so that compartment 620 may be accessed to insert changing pad refills or to remove changing pads.

[0031] Separator 622 is solid, thus preventing moisture or other material from compartment 610 from entering into the compartment 620.

[0032] The compartment 610 is configured to receive and dispense a plurality of infant wipes that are interleaved or separably attached (e.g., with serrations between wipes) for dispensing. Such wipes and wipe refills are commercially available.

[0033] The compartment 620 is configured to receive and dispense a plurality of changing pads in accordance with the invention. An example of such changing pad and changing pad assembly are described herein with reference to FIGS. 3 and 4.

[0034] Referring to FIGS. 7A and 7B, in accordance with the invention, a dispenser 710 is provided having a first compartment 710 configured to contain a plurality of wipes, and a second compartment 720 configured to contain a plurality of changing pads. First compartment 710 and second compartment 720 are defined by an outer wall portion 711, 721 respectively and at least one inner separator positioned between the first compartment and second compartment. Outer wall portion 711 forms top 714 of dispenser 700 which provides access to wipes stored therein. The top 714 includes a cover 716 for covering access opening 715. Cover 716 is coupled to the top 714 with hinge 717 that tends to spring the cover 716 open. The cover 716 further comprises a detent 718 that releasably engages the top 714 so that when engaged, the cover 716 closes the access opening 715 and when released the cover 716 springs open to allow access to the access opening 715. A release button 719 includes a detent mechanism (not shown) that engages detent 718 until the release button is depressed, thereby rotating the detent mechanism away from the detent 718 to release it. The access opening 715 may include a thin plastic 715a having a slits 715b for reaching into the chamber 710 to grasp one or more wipes.

[0035] As illustrated in FIG. 7A, a plurality of separators 712 and 722 are provided between the first compartment 710 and the second compartment 720 wherein the separator 712 has an inner wall 712a further defining compartment 710 and separator 722 has an inner wall 722a further defining compartment 720. Alternatively, a single separator may be provided such a separator similar to separator 622 described with reference to FIG. 6 herein.

[0036] The first compartment 710, second compartment 720 and separators 712, 722 are hingedly coupled to each other at one side 701 of the dispenser so that the first and second compartments are rotatably separable with respect to each other. Also top 714 may be rotated with respect to separator 712 so that compartment 710 may be accessed to insert wipe refills or to remove wipes. Also the separator 722 may be rotated with respect to bottom 724 so that compartment 720 may be accessed to insert changing pad refills or to remove changing pads.

[0037] In addition, bottom 724 (FIG. 7B) comprises an access opening 725 for withdrawing changing pads from compartment 720. The access opening 725 may comprise a thin plastic 725a having a slit 725b for reaching into the chamber 720 to grasp one or more changing pads. The separators 710, 720 may have interfacing surfaces that are fitted with each other to reduce space between the separators. Either one or both of separators 712, 722 are solid, thus preventing moisture or other material from compartment 710 from entering into the compartment 720 through the access opening 725 when the separators 710, 720 are closed together.

[0038] The compartment 710 is configured to receive and dispense a plurality of infant wipes that are interleaved or separably attached (e.g., with serrations between wipes) for dispensing. Such wipes and wipe refills are commercially available.

[0039] While the changing pads described herein are constructed in a particular manner with the changing pads interleaved, a dispenser in accordance with an aspect of the invention may contain changing pads in other configurations as well including, for example, where the changing pads are not interleaved.

1. A dispenser for dispensing for dispensing infant changing pads comprising:

   a first compartment configured to contain a plurality of wipes and comprising a first dispenser opening configured to dispense a plurality of wipes in a series;

   a second compartment configured to contain a plurality of changing pads and comprising a second dispenser opening configured to dispense a plurality of changing pads; and

   a separator between the first compartment and second compartment configured to separate the wipes from the changing pads.

2. The dispenser of claim 1 wherein the first compartment and second compartment are hingedly coupled to each other so that the dispenser comprises an open position where the first compartment and second compartment are separated from each other and a closed position where the first compartment and second compartment are adjacent each other.

3. The dispenser of claim 1 wherein the separator comprises at least one of said first dispenser opening and said second dispenser opening.

4. The dispenser of claim 3 wherein the separator comprises a first separator configured to enclose a portion of the first compartment and a second separator configured to enclose a portion of the second compartment.

5. The dispenser of claim 4 wherein the first separator comprises the first dispenser opening and the second separator comprises the second dispenser opening.

6. The dispenser of claim 5 wherein the dispenser has a closed position wherein the first separator and the second separator are configured to face each other and wherein the
first separator and second separator are configured to substantially isolate the first dispenser opening from the second dispenser opening when the dispenser is in the closed position.

7. The dispenser of claim 6 wherein the first separator and the second separator form a sealing arrangement configured to seal at least one of the first dispenser opening and second dispenser opening from leakage when the dispenser is in the closed position.

8. The dispenser of claim 1 wherein the first compartment comprises a top having a first outer wall and wherein the first dispenser opening is located on the top through the first outer wall.

9. The dispenser of claim 8 wherein the second compartment comprises a bottom having a second outer wall and wherein the second dispenser opening is located on the bottom through the second outer wall.

10. The dispenser of claim 1 wherein the second compartment comprises a bottom having an outer wall and wherein the second dispenser opening is located on the bottom through the outer wall.

11. The dispenser of claim 1 wherein the first dispenser opening is configured to dispense a plurality of changing pads in a series.

12. A changing pad assembly comprising:

a plurality of changing pads configured to be dispensed in a series, wherein each of said changing pads comprises:

a sheet member having a sheet length comprising a first end of the sheet length and an opposing second end of the sheet length, wherein the sheet member is folded in an accordion-like configuration, wherein a first fold line across said sheet length at the first end forms a first end portion having a first length, wherein a second fold line across said sheet length at the second end forms a second end portion having a second length shorter than the first length; and

wherein the plurality of changing pads are packaged in an interleaved fashion so that the first end of a changing pad is interleaved with a second end of an adjacent changing pad.

13. The changing pad assembly of claim 12 wherein each sheet of said plurality of changing pads comprises and absorbent portion coupled thereto.

14. The changing pad assembly of claim 13 wherein each sheet of said plurality of changing pads comprises:

an inner surface and an outer surface, wherein the absorbent portion is positioned on the inner surface; and

at least one lengthwise fold along the sheet length, wherein each sheet is folded along the at least one lengthwise fold so that the absorbent portion is covered by the sheet.

15. The changing pad assembly of claim 12 wherein each of said plurality of changing pads has a periphery and further comprises a drawstring positioned adjacent at least a portion of the periphery.

16. A changing pad comprising: a sheet member having a sheet length comprising a first end of the sheet length and an opposing second end of the sheet length, wherein the sheet member is folded in an accordion-like configuration, wherein a first fold line across said sheet length at the first end forms a first end portion having a first length, wherein a second fold line across said sheet length at the second end forms a second end portion having a second length shorter than the first length.

17. The changing pad of claim 16 the sheet further comprises and absorbent portion coupled thereto.

18. The changing pad of claim 17 wherein the sheet further comprises:

an inner surface and an outer surface, wherein the absorbent portion is positioned on the inner surface; and

at least one lengthwise fold along the sheet length, wherein each sheet is folded along the at least one lengthwise fold so that the absorbent portion is covered by the sheet.

19. The changing pad of claim 16 wherein the changing pad has a periphery and further comprises a drawstring positioned adjacent at least a portion of the periphery.