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(54) **PORTABLE CHANGING PAD, SYSTEM AND DISPENSER**

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B65H 1/00 (2006.01)

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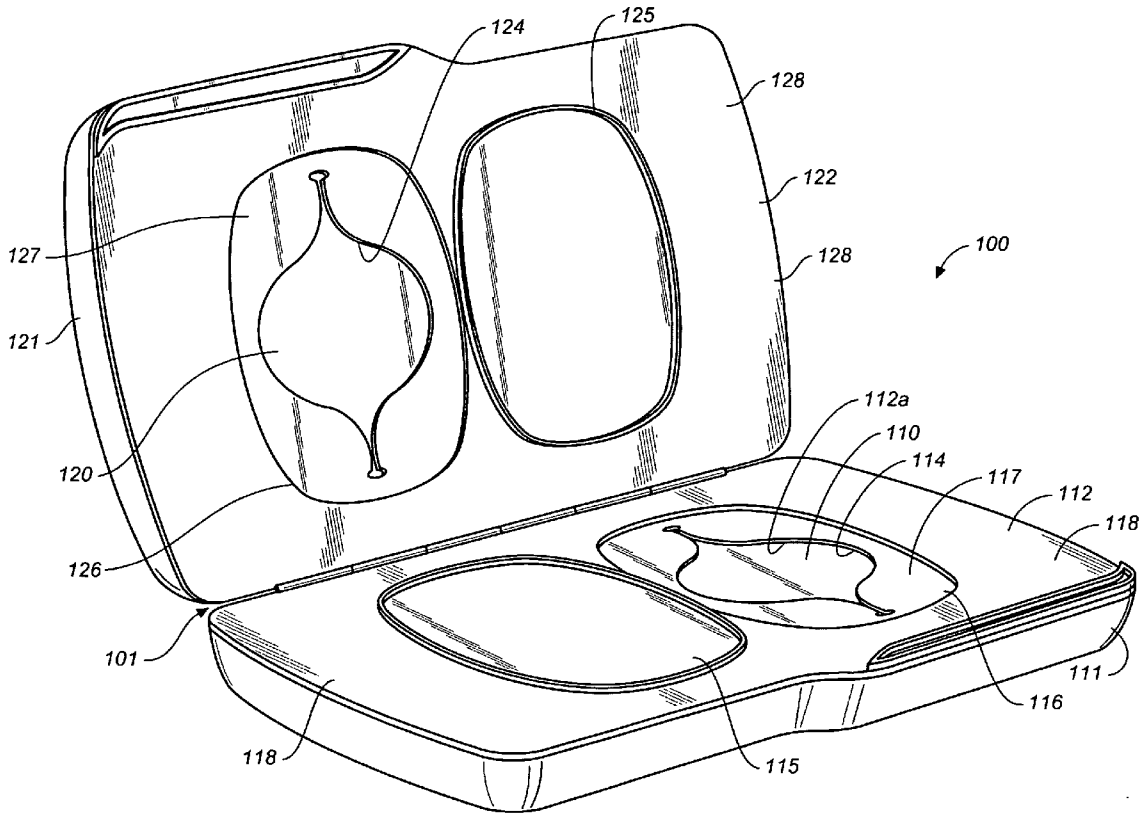
(57) **ABSTRACT**

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.



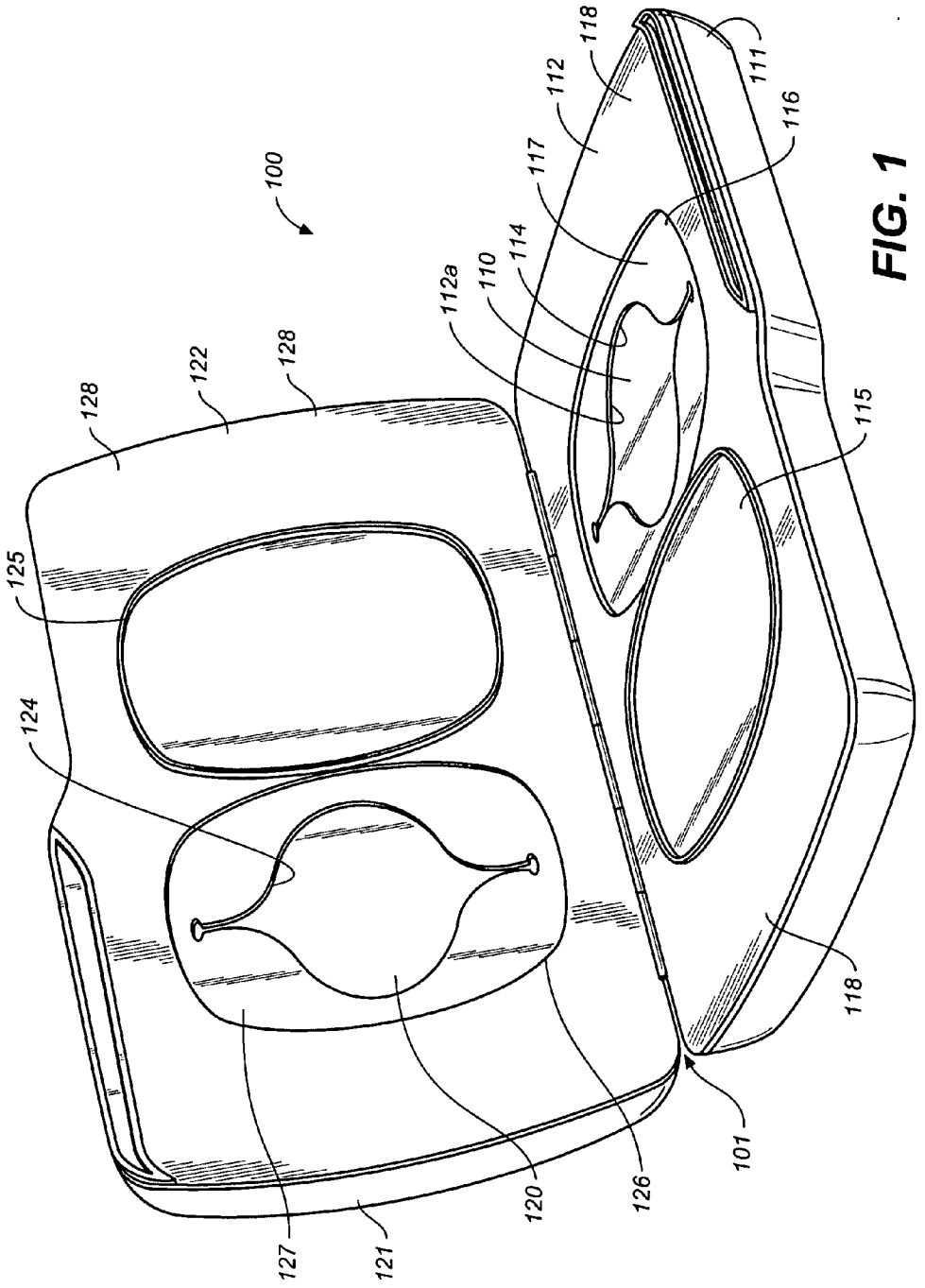

100
128
122
128
112a
110
114
117
112
118
111
116
115
125
124
118
101
127
121
120
126

FIG. 1

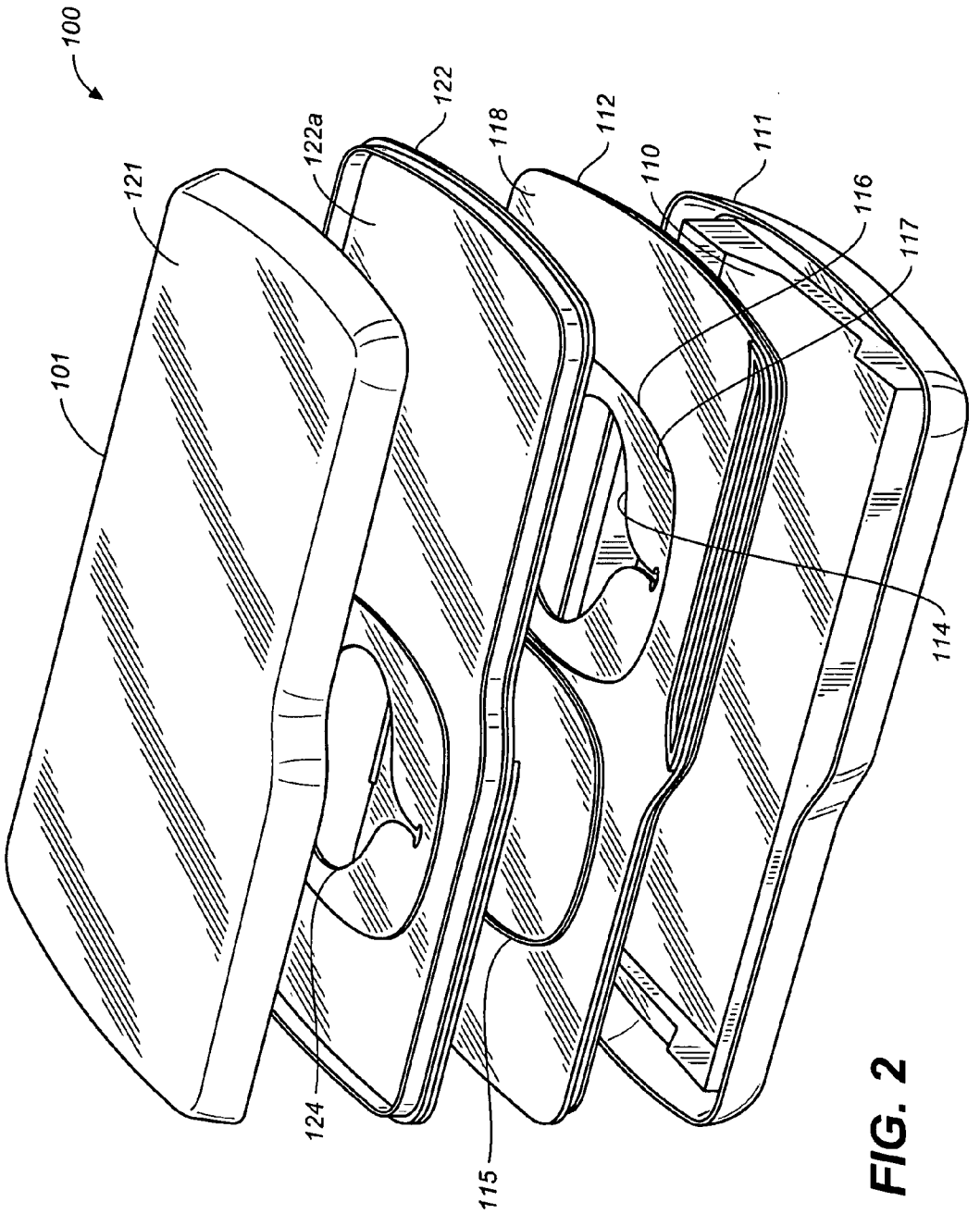
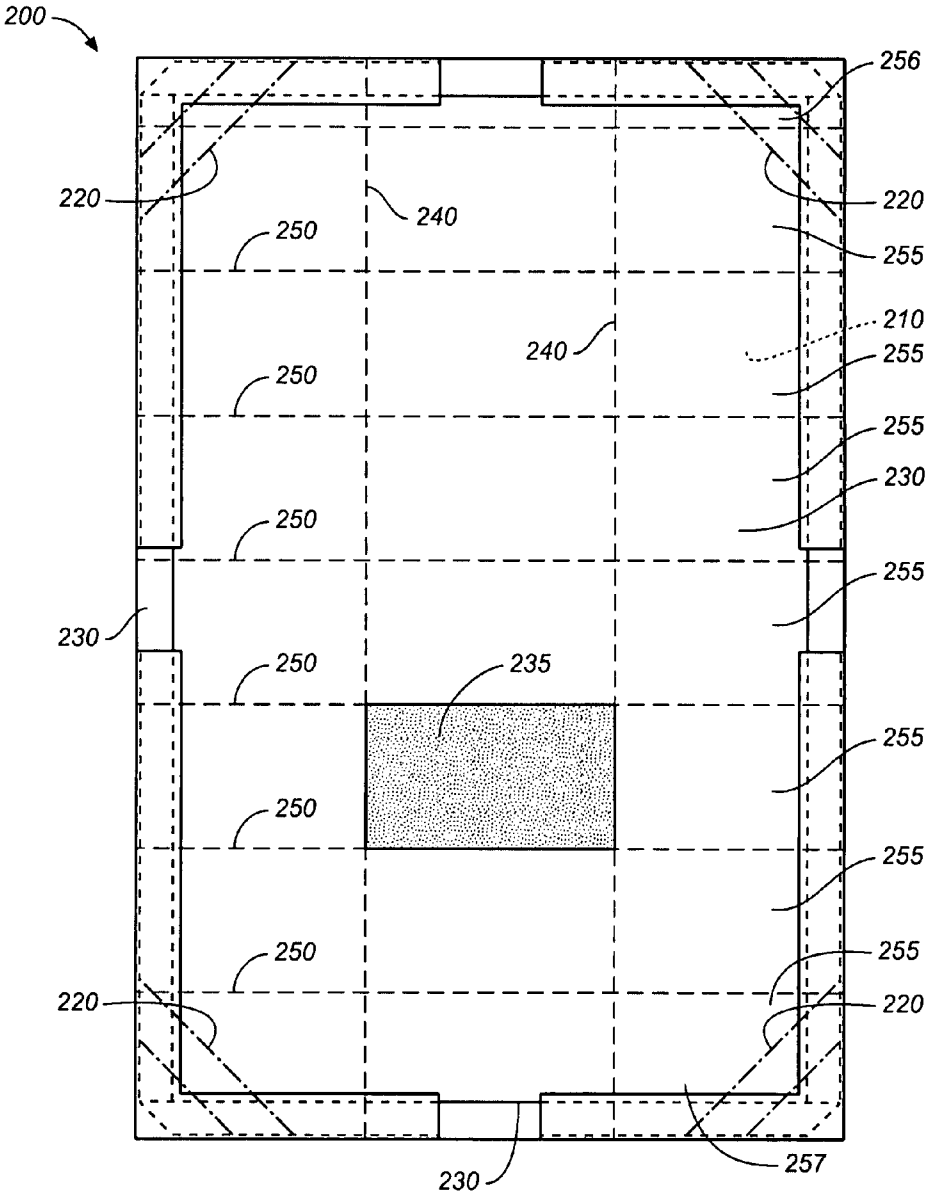


FIG. 2



Fold Line

Drawstring

Adhesive in phantom

FIG. 3

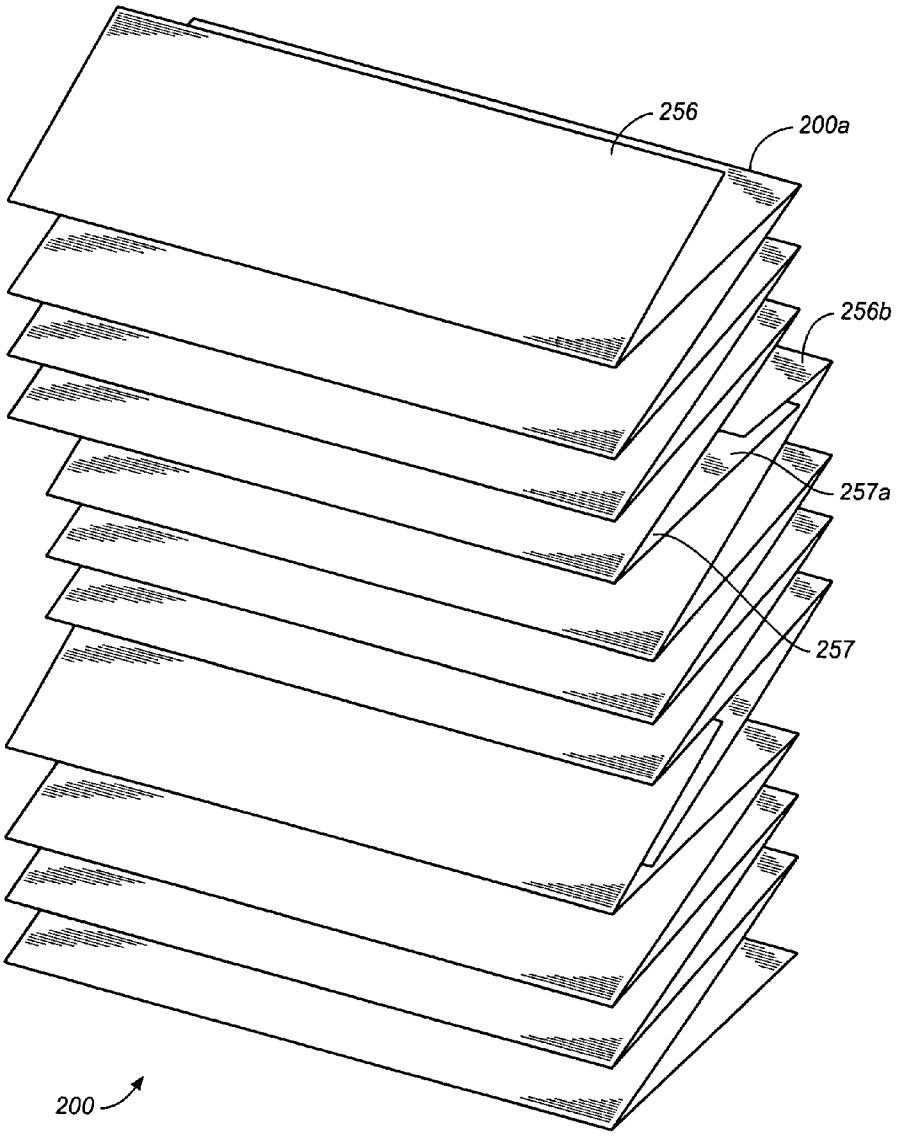


FIG. 4

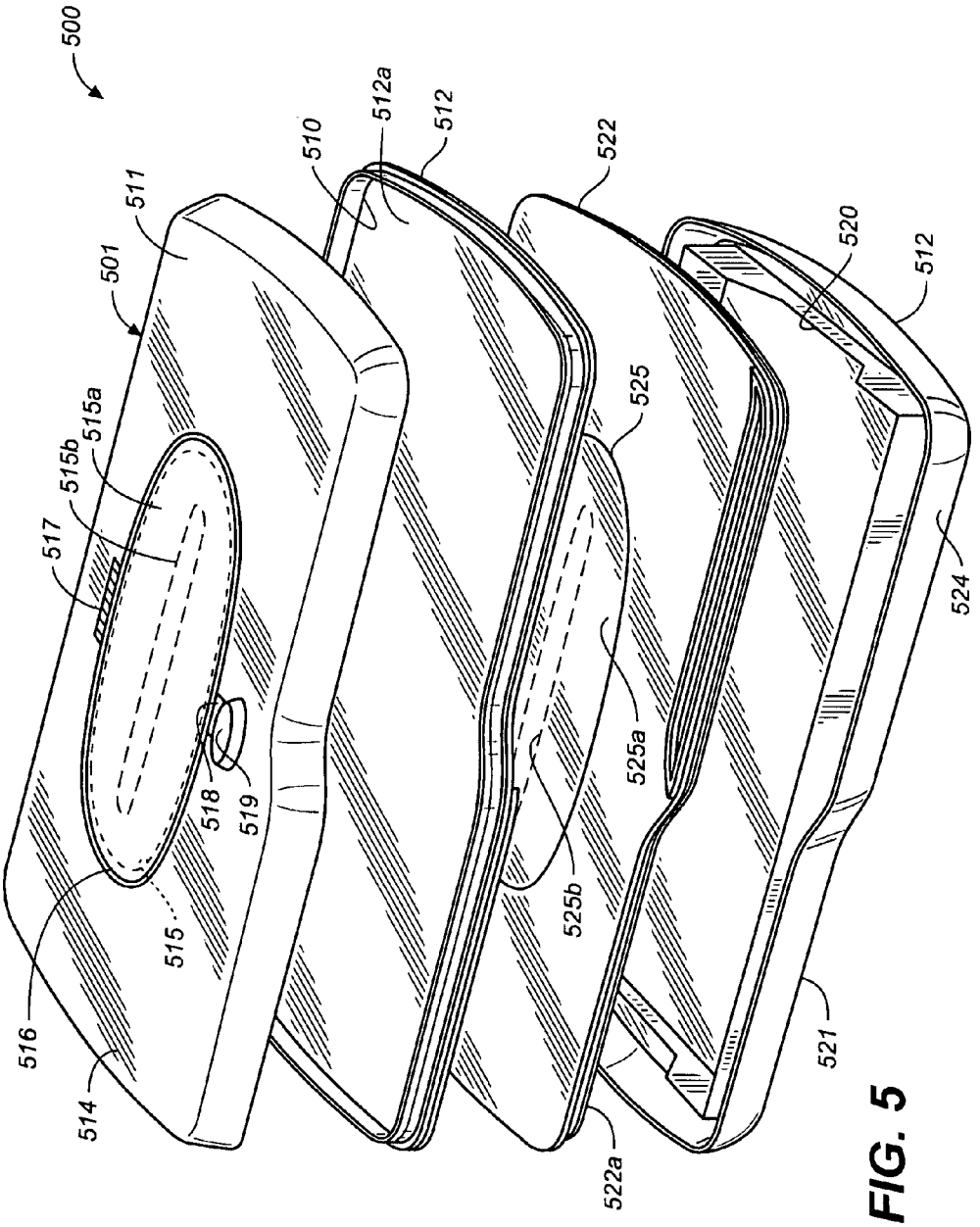

500
501
510
511
512
512a
515
515a
515b
516
517
518
519
520
521
522
522a
524
525
525a
525b

FIG. 5

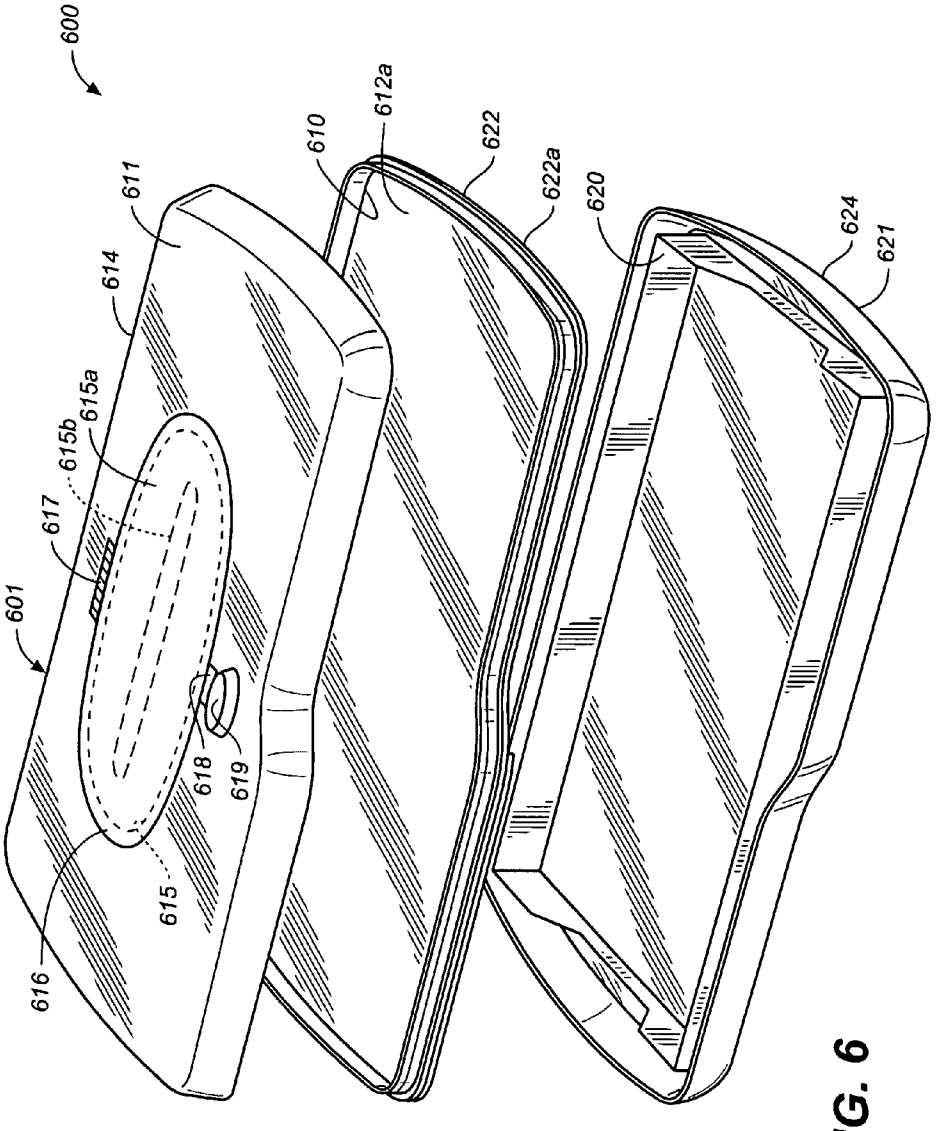

600
610
612a
622
622a
620
624
621
611
614
615a
615b
617
601
618
619
615
616

FIG. 6

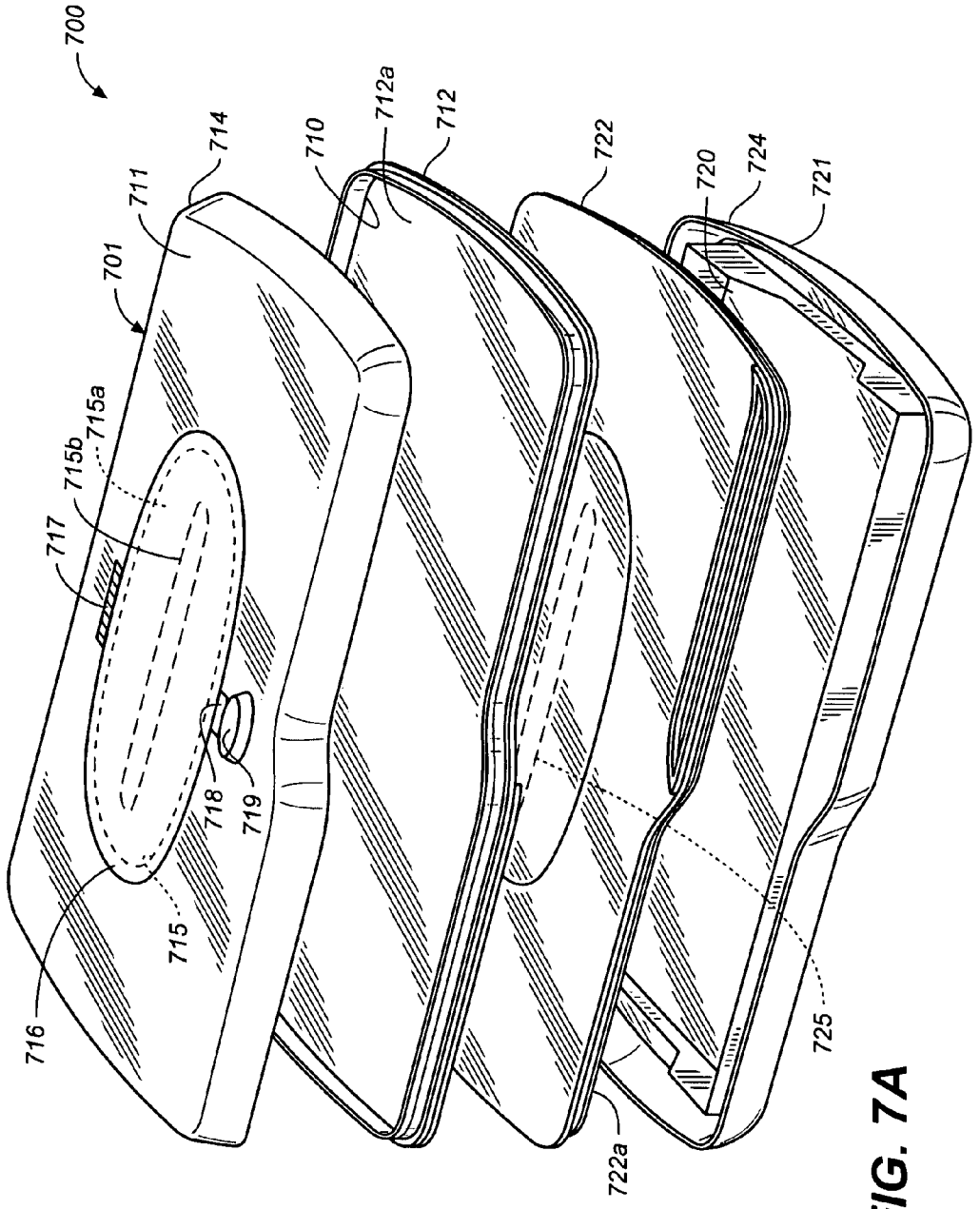

700
714
710
712a
712
722
720
724
721
711
701
715a
715b
717
718
719
715
716
725
722a

FIG. 7A

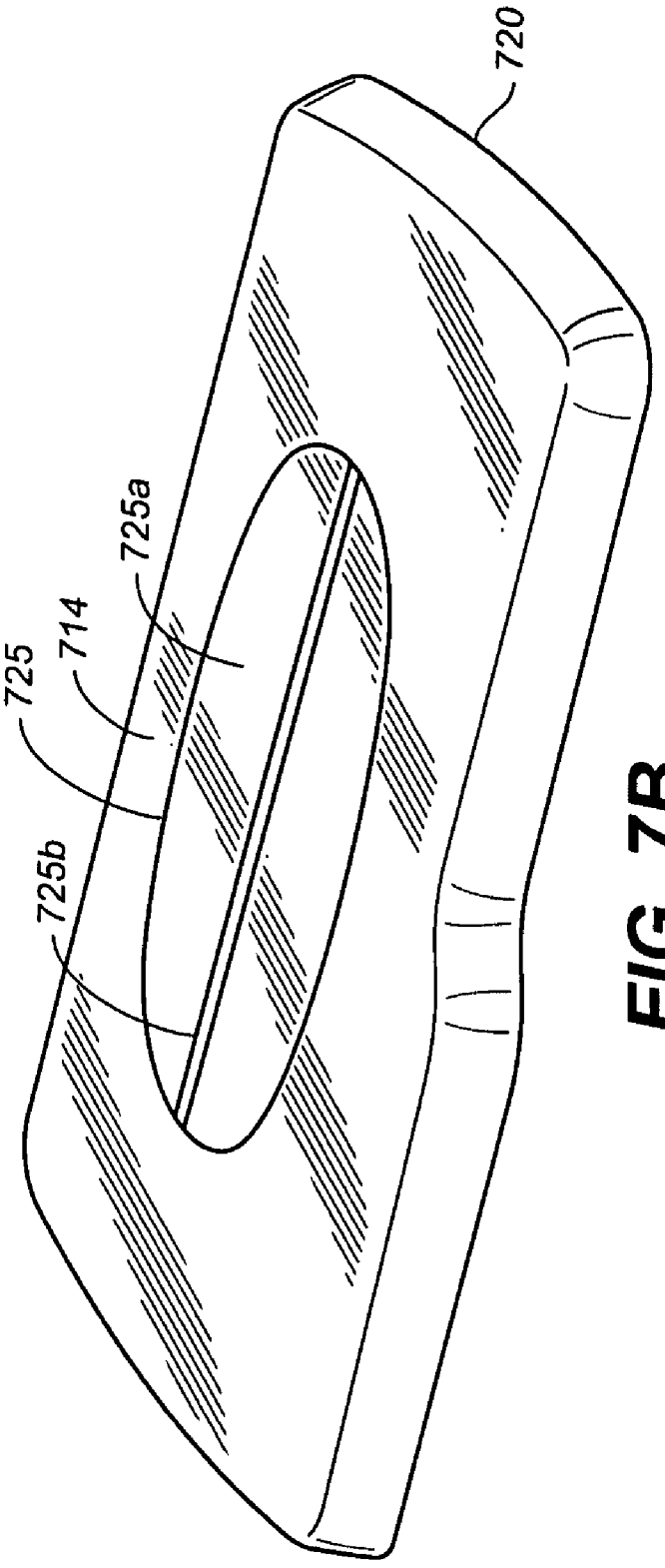


FIG. 7B

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 period 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. **7**A an exploded perspective view of a dispensing system in accordance with the invention.

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

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 **112***a* further defining compartment **110** and separator **122** has an inner wall **122***a* 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 and 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 **200***a* 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. **7**B). The end section **257***a* of the changing pad may draw end section **256***b* 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 **515***a* having a slit **515***b* 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 **512***a* further defining compartment **510** and separator **522** has an inner wall **522***a* 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 **525***a* having a slit **525***b* 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 **615***a* having a slit **615***b* 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 **622***a* further defining compartment **620** and an upper inner wall **612***a* 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. **7**A and **7**B, in accordance with the invention, a dispenser **700** 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 **715***a* having a slit **715***b* for reaching into the chamber **710** to grasp one or more wipes.

[**0035**] As illustrated in FIG. **7**A, 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 **712***a* further defining compartment **710** and separator **722** has an inner wall **722***a* 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. **7**B) comprises an access opening **725** for withdrawing changing pads from compartment **720**. The access opening **725** may comprise a thin plastic **725***a* having a slit **725***b* 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 wipers) 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 that 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 that 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.

* * * * *