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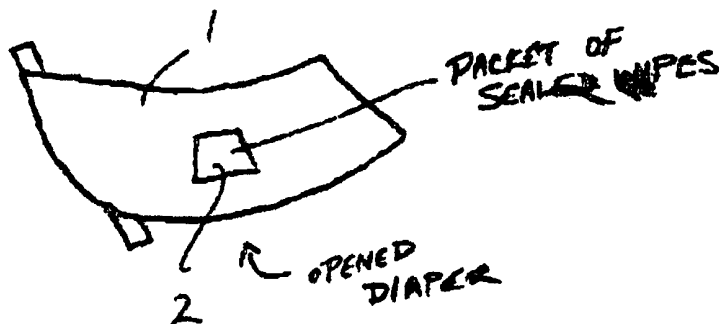
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(54) Title: IMPROVED DISPOSABLE DIAPER AND WIPE COMBINATION



(57) Abstract: A method for providing a compact and easy-to-use diaper/wipe combination. A sealed baby wipe packet (2) is placed on an interior surface of a disposable diaper. The diaper (1) is then tightly rolled into a cylindrical shape, and tightly shrink wrapped. Perforations may be made in the shrink wrap to permit the shrink wrap to be easily opened. Due to the tightly rolled diaper contained within the shrink wrap, a plurality of diaper cylinders may be carried within a small and light container.

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**IMPROVED DISPOSABLE DIAPER
AND WIPE COMBINATION**

RELATED APPLICATION

This application is based on Provisional Patent Application, Serial No. 60/185,905, filed on February 29, 2000.

5 FIELD OF THE INVENTION

This invention relates to disposable diapers and, more particularly, to a completely compact solution for providing a disposable diaper/wipe combination which is easy to use and eliminating the need for a complete diaper bag.

10 BACKGROUND OF THE INVENTION

Disposable diapers have been known for a substantial period of time and are a great convenience to a young child's caregiver. Also, it is known that it is an advantage for the caregiver to provide a diaper/wipe combination so that a moistened wipe is available to the caregiver at the time the diaper is used.

15 For example, U.S. Patent No. 4,738,678, granted to Robert a. Paulis on April 19, 1988, describes a diaper/wipe combination in which a disposable diaper, when opened, provides a separate pre-moistened towelette for use by the caregiver for cleaning the child at the time the diaper is used.

Similarly, U.S. Patent No. 5,304,158, granted to Joseph A. Webb on April 19, 1994,
20 discloses a disposable diaper system in which the diaper includes a pouch in which is contained

a changing pad and personal care products for use when the diaper is changed. After use, the soiled diaper may be wrapped in the changing pad and placed in the pouch for disposal.

An additional reference directed to the same idea is disclosed in U.S. Patent No. 6.004,307, granted to Richard and Carmen Colon on December 21, 1999. In this reference, an infant's diaper has an exterior surface to which a plurality of packets are adhesively secured, each having personal care items therein, such as a pre-moistened towelette, powders and the like.

Although the aforementioned references provide an improved level of convenience to a child's caregiver, they are, for the most part, bulky and difficult to transport, especially in quantity. Thus, the prior art provides little improvement over the standard diaper bag.

It is, therefore, an object of this invention to solve the problems inherent in the prior art, the invention being especially directed to solving the problem of transporting a plurality of bulky diapers.

It is another object of the invention to provide a diaper/wipe combination which is extremely compact and easy to use.

It is a still further object of the invention to provide a diaper/wipe combination which is contained within a compact sanitary package so that a plurality of diapers can be easily transported by the child's caregiver.

SUMMARY OF THE INVENTION

The invention is directed to a method for providing an extremely compact diaper/wipe combination which is easy to use and easy to transport in volume.

An open disposable diaper has placed on an inner surface a sealed packet containing a pre-moistened towelette. The diaper is then tightly rolled into a cylindrical shape with the packet inside.

After rolling, the diaper cylinder is then tightly shrink wrapped. The shrink wrap may
5 also be perforated around the cylinder so that the diaper may be easily used.

Due to the tight shrink wrapping, a plurality of the cylinder diaper/wipe combinations can be easily transported in a small and light container.

Other objects, features and advantages of the present invention will be apparent from the following detailed description of a preferred embodiment when considered in conjunction with
10 the attached drawings and the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 shows a disposable diaper in the open position, with a small sealed package of
15 wipes positioned on an interior surface of the diaper;

FIG. 2 shows the diaper being rolled into a cylindrical shape; and

FIG. 3 shows the cylindrical diaper/wipe combination as being tightly shrink wrapped.

DETAILED DESCRIPTION

20 Referring now to FIG. 1, there is shown a disposable diaper (1) in an open position. Placed on an interior surface of diaper (1) is a sealed packet of baby wipes (2). It is, of course, understood that any type of disposable diaper or sealed packet of baby wipes could be used in accordance with the invention.

FIG. 2 illustrates the disposable diaper being rolled with the baby wipe packet (2) contained within the rolled diaper. Rolling of the diaper into a cylindrical shape can be done manually, or by automated means, so long as the diaper cylinder is tightly rolled.

FIG. 3 illustrates the final step in the inventive method, wherein the diaper cylinder
5 formed in FIG. 2 is tightly shrink wrapped. Again, the shrink wrapping step can be done manually, or can be fully automated.

Shown at (3) in FIG. 3 is a line of perforations that can extend around the shrink wrapped diaper cylinder to allow the shrink wrap to be easily opened. It is to be understood that the perforation shown at (3) can also be lateral to the diaper cylinder, as well as cylindrical as shown.

10 Although there has been shown and described a preferred embodiment of the present invention, it will be readily understood that modifications may be made within the scope of the appended claims and, therefore, the scope of the invention is only to be limited by the following claims.

WHAT IS CLAIMED IS:

1. A method for providing a diaper/wipe package combination, comprising the steps of:

placing a sealed packet containing a pre-moistened baby wipe on an inner surface
5 of a disposable diaper;

tightly rolling the disposable diaper into a cylindrical shape with the baby wipe
being within the diaper cylinder; and

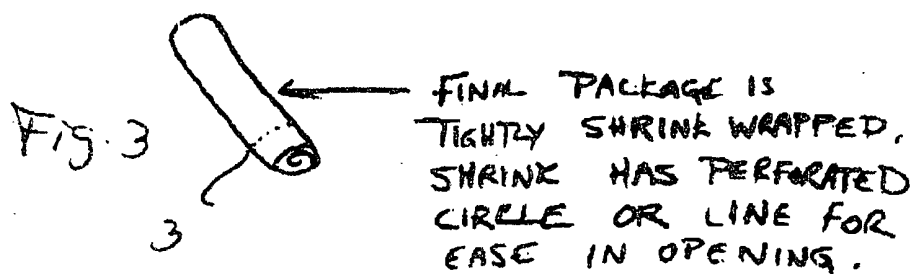
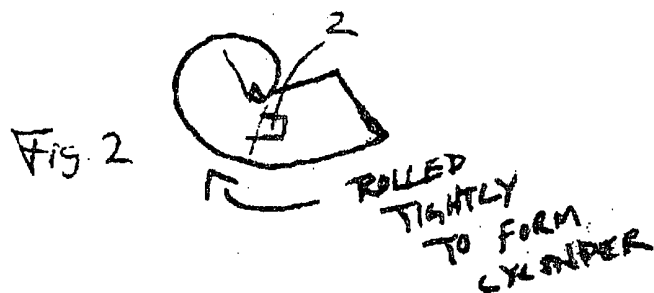
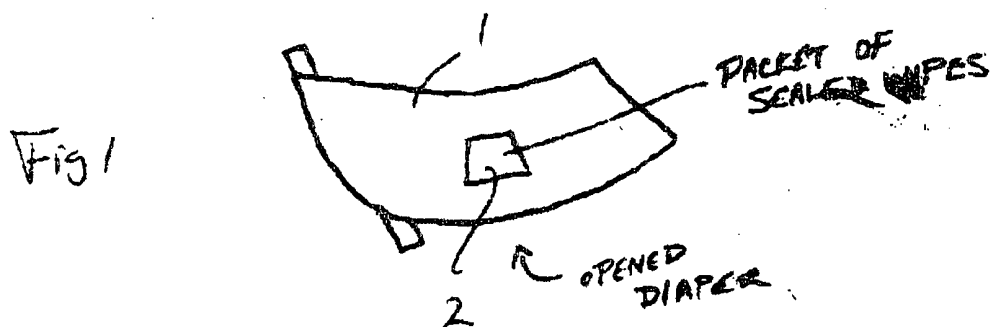
shrink wrapping the diaper cylinder.

10 2. A method in accordance with Claim 1, wherein there is further included the step
of perforating the shrink wrap, whereby the shrink wrapped cylinder can be easily opened.

3. A method in accordance with Claim 2, wherein said perforating step includes the
step of arranging the perforations in a circle around said diaper cylinder.

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4. A method in accordance with Claim 3, wherein a plurality of said diaper cylinders
are included within a single diaper package.



INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :A61F 13/15, 13/20
US CL :604/385.06; 206/390,438

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 604/385.06, 385.13, 206/390,432,438,446,812

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

APS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,569,230 A (FISHER et al) 29 October 1996, col. 18, lines 54-55; col.19, lines 59-61; col. 25, lines 34-37; figures 14, 20 and 21	1
Y	US 4,770,298 A (MCFARLAND et al) 13 September 1988, col. 3, line 44 to col. 5, line 47 and figures 6 -10	1-2,4
Y,P	US 6,105,776 A (MEILHON) 22 August 2000, col.1, line 49 to col. 2, line 55 and figure 1.	1-4
Y	US 5,071,414 A (ELLIOTT) 10 December 1991, col. 1, lines 7 - 10 and figure 6.	1
Y	US 3,963,029 A (BROOKS) 15 June 1976, figure 7.	1

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US01/40116

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3,613,875 A (FRANKE) 19 October 1971, see entire reference.	1
A	US 5,533,621 A (SCHOAL, JR) 9 July 1996, see entire reference.	1
Y	US 3,892,310 A (WELIN-BERGER) 1 July 1975, col. 1, line 3 to col. 2, line 60 and figure 1.	1-2,4