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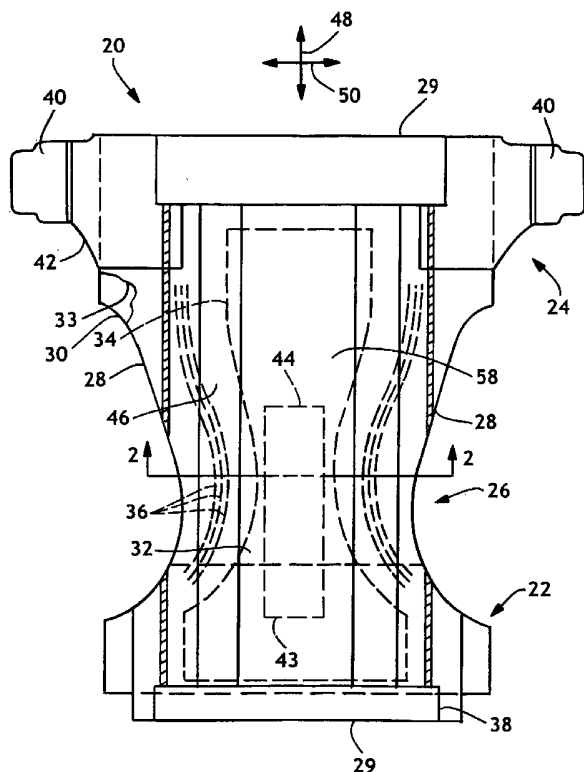
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[Continued on next page]

(54) Title: STRETCHABLE ABSORBENT ARTICLE HAVING ZONES OF DIFFERENTIAL STRETCH



(57) Abstract: A disposable absorbent article is provided which includes a substantially liquid-impermeable, stretchable outer cover, a liquid permeable, stretchable top surface, and an absorbent body located between the outer cover and the top surface. The stretchable top surface can further include a first zone and a second zone. The stretchable outer cover can be configured to provide a first level of elongation when subjected to a tensile force of 100 gmf per inch (per 2.54 cm) of width according to the Material Elongation and Deformation Tensile Test set forth herein, while the first zone provides a second level of elongation that is less than the first level of elongation.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
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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)
IPC 7 A61F

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 practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 624 422 A (ALLEN PATRICK J) 29 April 1997 (1997-04-29)	1, 2, 4, 10, 13, 17, 18, 20, 26, 29, 33, 36, 39, 42, 43, 45
Y	column 5, line 6-60 column 6, line 14-67 figures 1-5 column 4, line 27-33 column 7, line 23-25	3, 9, 11, 12, 14, 19, 25, 27, 28, 30, 34, 35, 37, 38, 40, 44, 47
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Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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- "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

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Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p style="text-align: center;">---</p> EP 1 064 893 A (UNI CHARM CORP) 3 January 2001 (2001-01-03)	1,2,10, 16-18, 26,32, 42,43,46
A	column 1, line 3-6 column 8, line 30-41 column 9, line 18 -column 10, line 37; figures 1-3	17
Y	<p style="text-align: center;">---</p> US 5 846 232 A (SERBIAK PAUL JOHN ET AL) 8 December 1998 (1998-12-08)	3,19,34, 44
X	column 7, line 1-10 column 3, line 36-39 column 4, line 50-65 column 6, line 44-62 column 8, line 61 -column 10, line 15 column 12, line 28-30 figures 1-9	5,21
A	<p style="text-align: center;">---</p> US 5 037 416 A (ALLEN PATRICK J ET AL) 6 August 1991 (1991-08-06)	13,39
Y	column 6, line 64 -column 9, line 18	11,12, 14,27, 28,30, 37,38, 40,47
Y	<p style="text-align: center;">---</p> WO 00 38911 A (KIMBERLY CLARK CO) 6 July 2000 (2000-07-06) cited in the application	9,25,35
A	claims 1,19,20; tables 1-14	11,12, 14,27, 28,30, 37,38, 40,47
A	<p style="text-align: center;">---</p> US 4 695 278 A (LAWSON MICHAEL I) 22 September 1987 (1987-09-22) figures 1-7	1,17,33, 42
A	<p style="text-align: center;">---</p> WO 99 65438 A (KIMBERLY CLARK CO) 23 December 1999 (1999-12-23) cited in the application claim 1; figure 1	17
A	<p style="text-align: center;">---</p> US 4 909 803 A (AZIZ MOHAMMED I ET AL) 20 March 1990 (1990-03-20) figure 3	1,17,33, 42
A	<p style="text-align: center;">---</p> US 4 673 402 A (GELLERT DALE A ET AL) 16 June 1987 (1987-06-16) column 5, line 50-60 figure 1	4
	<p style="text-align: center;">---</p> -/--	

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 02/03682

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 52506 A (KIMBERLY CLARK CO) 26 November 1998 (1998-11-26)	6,8,15, 22,24,31
Y	page 1, line 6,7 page 3, line 21-35 page 5, line 5-11 page 35, line 34,35 page 11, line 12-31 page 13, line 1 -page 14, line 9 page 15, line 13-32 page 16, line 17 -page 17, line 2 page 18, line 19-25 page 20, line 28 -page 21, line 28 page 25, line 9-12 page 26, line 28-31 page 30, line 30 -page 31, line 13; figures 1,2B,5,7	7,23
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A	US 4 486 192 A (SIGL WAYNE C) 4 December 1984 (1984-12-04) column 4, line 24 -column 5, line 32 column 6, line 38 -column 7, line 49 column 9, line 50-58 column 14, line 20-39; figures 1-9	8,24

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 02/03682

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

- 1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

- 2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

- 3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

- 1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

- 2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

- 3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

- 4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-4,9-14,16-20,25-30,32-47

An absorbent article comprising

- a substantially liquid-impermeable stretchable outer cover configured to provide a first level of elongation ;
- a liquid permeable stretchable top surface attached to said stretchable outer cover; said stretchable top surface having a first zone that is configured to provide a second level of elongation that is less than said first level of elongation;
- at least one containment component attached to said liquid permeable top surface;
- an absorbent body located between said stretchable outer cover and said stretchable top surface.
- wherein said first zone is provided by a combination of a surge layer attached to an extensible bodyside liner.

2. Claims: 5,21

An absorbent article comprising

- a substantially liquid-impermeable stretchable outer cover configured to provide a first level of elongation ;
- a liquid permeable stretchable top surface attached to said stretchable outer cover; said stretchable top surface having a first zone that is configured to provide a second level of elongation that is less than said first level of elongation;
- at least one containment component attached to said liquid permeable top surface;
- an absorbent body located between said stretchable outer cover and said stretchable top surface.

wherein said first zone is provided by a combination of a tissue layer attached to an extensible bodyside liner.

3. Claims: 6,7,22,23

An absorbent article comprising

- a substantially liquid-impermeable stretchable outer cover configured to provide a first level of elongation ;
- a liquid permeable stretchable top surface attached to said stretchable outer cover; said stretchable top surface having a first zone that is configured to provide a second level of elongation that is less than said first level of elongation;
- at least one containment component attached to said liquid

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

permeable top surface;
- an absorbent body located between said stretchable outer cover and said stretchable top surface.

wherein said first zone is provided by a combination of a layer of adhesive applied to an extensible bodyside liner.

4. Claims: 8,24

An absorbent article comprising

- a substantially liquid-impermeable stretchable outer cover configured to provide a first level of elongation ;
- a liquid permeable stretchable top surface attached to said stretchable outer cover; said stretchable top surface having a first zone that is configured to provide a second level of elongation that is less than said first level of elongation;
- at least one containment component attached to said liquid permeable top surface;
- an absorbent body located between said stretchable outer cover and said stretchable top surface.

wherein said first zone is provided by a heat settable bodyside liner.

5. Claims: 15,31

An absorbent article comprising

- a substantially liquid-impermeable stretchable outer cover configured to provide a first level of elongation ;
- a liquid permeable stretchable top surface attached to said stretchable outer cover; said stretchable top surface having a first zone that is configured to provide a second level of elongation that is less than said first level of elongation;
- at least one containment component attached to said liquid permeable top surface;
- an absorbent body located between said stretchable outer cover and said stretchable top surface.

wherein said first zone is provided by a means restricting the stretchability of the bodyside liner .

INTERNATIONAL SEARCH REPORT

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International Application No

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