

ESCOBAR - URIBE ASOCIADOS

A B O G A D O S

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As. 2456/P.

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

DIVISIÓN DE NUEVAS CREACIONES

E.

S.

D.

Radicación: 01009850 00000004 Folios: 2
Fecha (HID): 2004-01-29 16:01:37
Trámite: 002 PATENTES D 1 REGISTRO/ 538 PETICION
Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

Ref.: Expediente No. 01-089.850

Solicitud de Patente a nombre de

Johnson & Johnson Industria e Comercio Ltda.

Yo, JIMENA ESCOBAR URIBE, identificada como aparece al pie de mi firma, domiciliada en Bogotá, en la Carrera 11 A No. 94-76 Of. 305, obrando como apoderada de la sociedad Johnson & Johnson Industria e Comercio Ltda., domiciliada en Sao Paulo, SP, Brasil, solicitante de la patente de la referencia, pido a usted que se proceda a examinar si la invención, cuya patente se tramita en el expediente de la referencia, es patentable.

Adjunto al presente memorial el recibo No. 04 - 4,432 de enero 21 de 2004, por la suma de \$353.000.00, con lo cual queda cubierta la tasa oficial correspondiente a dicho estudio.

Señor Superintendente,


JIMENA ESCOBAR URIBE

C.C. 39.779.452 de usaquén

T.P. 68.228

Cod. 5376

JEU/ra.

2456 55

NIT : 800176089-2

SUPERINDUSTRIA Y COMERCIO

Radicacion : 81089658 80080004

Folios: 2

Fecha (AM): 2004-01-29 16:01:37

Tramite : 002 PATENTES 0 1 REGISTRO/ 538 PETICION

Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

RECIBO OFICIAL DE CAJA : 04 - 4,432
FECHA : ENERO 21 DE 2004

***** CONSIGNACION *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PAGO	Vr. PAGO
ESCOBAR URIBE ASOCIADOS	CONSIGNACION	BANCO POPULAR	050-00110-6	8096559	21/01/2004	2,496,000.00

***** CONCEPTO *****

CANT.	RENTISTICO	CONCEPTO	TOTAL CONCEPTO
1	50005-01-01 SOLICITUDES	112 PTC CAP-I EXAMEN DE PATENTIBILIDA	353,000.00
		TOTAL :	\$ 353,000.00

SON: TRESCIENTOS CINCUENTA Y TRES MIL PESOS

RESPONSABLE : 

RECIBO DE CAJA APLICADO AL EXPEDIENTE No. _____

DIVISION DE NUEVAS CREACIONES

RADICACIÓN EXPEDIENTE No. 01-89850

EL EXTRACTO DE LA PRESENTE SOLICITUD DE PATENTE DE INVENCION FUE PUBLICADO

EN LA GACETA DE PROPIEDAD INDUSTRIAL No 531, DE FECHA 29 DE AGOSTO DE 2003,

EL TERMINO HABIL SEÑALADO POR LA LEY EXPIRA EL 28 DE NOVIEMBRE DE 2003.

NOTA: Dentro del plazo de los seis (6) meses siguientes a partir de la fecha de publicación en la gaceta de Propiedad Industrial, deberá solicitar y cancelar el examen de patentabilidad so pena de que la solicitud caiga en abandono, de acuerdo con lo establecido en el Artículo 44 de la Decisión 486/2000.

SE PRESENTARON OPOSICIONES POR PARTE DE TERCEROS.

SI _____

NO ☒ _____

**SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIVISIÓN DE NUEVAS CREACIONES**

2020

Bogotá D.C., Noviembre 29 de 2005

Doctor

JIMENA ESCOBAR URIBE

Apoderado JOHNSON & JOHNSON INDUSTRIA E COMERCIO LTDA.

ASUNTO	Radicación	01-89850
	Trámite	002
	Evento	001
	Actuación	430
	Oficio	11271
	Folios	016

Como resultado del examen de fondo, realizado con fundamento en el artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le comunica:

1. Documentos estudiados:

- A. Para el presente estudio se tuvo en cuenta el capítulo descriptivo, comprendido en los folios 5 a 12 del expediente correspondiente a la solicitud en estudio, tal como fue radicado al inicio del trámite.
- B. Dibujos en los folios 16 a 17
- C. El capítulo reivindicatorio tomado en cuenta para el presente estudio comprende 10 reivindicaciones y se encuentra en los folios 13 y 14, tal como fue radicado al inicio del trámite.
- D. Conforme lo establecen los artículos 9, 10 y 11 de la Decisión 486 de la Comisión de la Comunidad Andina, la presente solicitud en estudio fue presentada el 18 de octubre de 2001, en el momento de la radicación se reclamó prioridad. La copia certificada de la solicitud cuya prioridad fue reivindicada (BR PI00049360 del 19 de octubre de 2001) aparece junto con la traducción de las reivindicaciones en los folios 20 a 45.

2. Objeto de la invención:

- A. Las reivindicaciones 1 a 10 de la solicitud en estudio se refieren a: un pañal que comprende una capa de material permeable a fluido corporal adaptada para contactar el cuerpo de un usuario en uso, una capa de material impermeable a fluido corporal, un núcleo absorbente dispuesto entre, y encerrado por, dichas respectivas capas de material permeable e impermeable a fluido, el pañal que además incluye un par de márgenes laterales opuestos, un margen posterior y un extremo distal, siendo el extremo distal opuesto al margen posterior y definiendo entre ellos una longitud longitudinal, siendo el margen posterior adyacente a ambos márgenes laterales opuestos, el margen posterior y el extremo distal que tienen, cada uno, un respectivo ancho transversal, el margen posterior que comprende un elemento continuo en forma de anillo adaptado para ser usado alrededor de una región cintura del cuerpo de un usuario en uso, en donde el extremo distal se extiende y se mueve libremente con respecto al margen posterior y está adaptado para ser desprendiblemente fijado

a por lo menos una porción del margen posterior.

- B. El objeto de la solicitud se puede clasificar según la clasificación internacional como A 61F 13/15.

3. Claridad de la Solicitud:

- A. El artículo 28 de la Decisión 486 de la Comisión de la Comunidad Andina establece "la descripción deberá divulgar la invención de una manera suficientemente clara y completa para su comprensión y para que una persona capacitada en la materia técnica correspondiente pueda ejecutarla"

No es claro a qué se refiere el solicitante con la expresión "extremo distal". Según el diccionario de la Real Academia Española "distal" significa: "parte de un miembro o de un órgano más separada de la línea media". Aplicada esta definición a la expresión ya citada no es entendible a qué se refiere el solicitante.

En la descripción no es claro cuál es el avance cualitativo sobre las prendas ya conocidas en el estado del arte, más específicamente sobre las prendas divulgadas en los documentos citados más adelante en el presente requerimiento. No está del todo claro el efecto que tienen las relaciones medidas a las diferentes partes del pañal. Tampoco se cita una comparación de esas medidas con las medidas de los pañales conocidos en el estado del arte. No se tienen ejemplos de realizaciones preferidas del pañal reivindicado.

La expresión "longitud longitudinal" parece poco clara en castellana.

De acuerdo con lo anterior, la descripción no cumple con el requisito de claridad según lo establecido en el artículo 28 de la Decisión 486.

- B. En el artículo 30 de la decisión 486 de la Comisión de la Comunidad Andina se establece: "Las reivindicaciones definirán la materia que se desea proteger mediante la patente. Deben ser claras y concisas y estar enteramente sustentadas por la descripción. Las reivindicaciones podrán ser independientes o dependientes. Una reivindicación será independiente cuando defina la materia que se desea proteger sin referencia a otra reivindicación anterior. Una reivindicación será dependiente cuando defina la materia que se desea proteger refiriéndose a una reivindicación anterior. Una reivindicación que se refiera a dos o más reivindicaciones anteriores se considerará una reivindicación dependiente múltiple." En el artículo 51 se establece además: "El alcance de la protección conferida por la patente estará determinado por el tenor de las reivindicaciones."

- i. La reivindicación Independiente no se encuentra correctamente redactada. Por su estructura todas las reivindicaciones deben constar de dos partes. Una primera parte, el preámbulo, sirve para situar el objeto de la invención dentro de un contexto técnico; es lo que se conoce y sobre lo cual no se reclama ningún privilegio. La segunda parte o parte característica, define lo que se considera novedoso y se desea proteger. Estas dos partes están separadas por expresiones como "caracterizado por" o similares. Debe corregirse la reivindicación 1 para que quede bien definido el objeto para el cual se solicita protección.

- ii. Así como en la descripción se debe aclarar o corregir el término "extremo distal".

De acuerdo con lo anterior, el capítulo reivindicatorio no cumple con el requisito de

claridad según lo establecido en el artículo 30 de la Decisión 486. El solicitante deberá anexar un nuevo capítulo reivindicatorio con todas las correcciones aquí requeridas.

4. Determinación del estado de la técnica:

El artículo 16 de la Decisión 486 de la Comisión establece que: "El estado de la técnica comprenderá todo lo que haya sido accesible al público por una descripción escrita u oral, utilización, comercialización o cualquier otro medio antes de la fecha de presentación de la solicitud de patente o, en su caso, de la prioridad reconocida."

"Solo para el efecto de la determinación de la novedad, también se considerará dentro del estado de la técnica el contenido de una solicitud de patente en trámite ante la oficina nacional competente, cuya fecha de presentación o de prioridad fuese anterior a la fecha de presentación o de prioridad de la solicitud de patente que se estuviese examinando, siempre que dicho contenido esté incluido en la solicitud de fecha anterior cuando ella se publique o hubiese transcurrido el plazo previsto en el artículo 40"

La fecha para determinar el estado de la técnica es el 19 de octubre de 2000, tomando en cuenta la prioridad reivindicada.

Consultadas las bases de datos y los archivos con que cuenta la entidad, especialmente bajo las clasificaciones A 61 F 13/15, se encontró que antes del 19 de octubre de 2000 habían sido publicados los documentos enumerados en la siguiente tabla.

No.	Documento	Título	Fecha de publicación
D1	EP 0 638 304 A1	Pant style diapers	1995-02-15
D2	GB 2 277 867 A	Waist belt for absorbent garment	1994-11-16
D3	US 5,549,593	Device for the support of an absorbent article	1996-08-27

5. Evaluación de los requisitos de patentabilidad:

El artículo 14 de la Decisión 486 de la Comunidad Andina establece que: "*Los Países Miembros otorgarán patentes para las invenciones, sean de producto o de procedimiento en todos los campos de la tecnología, siempre que sean nuevas, tengan nivel inventivo y sean susceptibles de aplicación industrial*".

En cumplimiento del artículo 14 de la Decisión 486, se procedió a evaluar los requisitos de novedad, nivel inventivo y aplicación industrial con el fin de establecer la patentabilidad del objeto de la solicitud reivindicado en la solicitud en estudio.

A. Evaluación de la Novedad:

El artículo 16 de la decisión 486 de la Comisión de la Comunidad Andina establece:

"Una invención se considerará nueva cuando no esté comprendida en el estado de la técnica." "El estado de la técnica comprenderá todo lo que haya sido accesible al público por una descripción escrita u oral, utilización, comercialización o cualquier otro medio antes de la fecha de presentación de la solicitud de patente o, en su caso, de la prioridad reconocida."

Los tres documentos citados, D1 a D3, divulgan las características principales del pañal reivindicado. En los tres documentos se divulga un pañal que puede ajustarse de atrás hacia delante por medio de un cinturón, según los dibujos de la solicitud en estudio y de los tres documentos citados.

Luego, la novedad del objeto de la solicitud en estudio puede estar afectada y no cumplir con los requisitos del artículo 18 de la decisión 486.

B. Evaluación del nivel inventivo:

El artículo 18 de la Decisión 486 de la Comisión de la Comunidad Andina dispone que: "Se considerará que una invención tiene nivel inventivo, si para una persona del oficio normalmente versada en la materia técnica correspondiente, esa invención no hubiese resultado obvia ni se hubiese derivado de manera evidente del estado de la técnica".

Tanto el documento D1, como el D2 y el D3 divulgan pañales que cuentan con un sistema de postura idéntico al que reivindica el solicitante. En los tres documentos se divulgan pañales que cuentan con un sistema de anillo o cinturón alrededor de la cintura y con una porción del pañal que estando sujeto a la parte del pañal que corresponde a la espalda del usuario, más exactamente a nivel de la cintura, se extiende para pasar por la entrepierna y ajustarse en la parte de adelante del pañal que corresponde al vientre del usuario. Las diferencias con el pañal reivindicado en la solicitud estudiada residen en características de diseño, de relaciones entre ciertas porciones del pañal que, según lo leído en la descripción, no representan un efecto inesperado ni tampoco un salto cualitativo en la técnica. Por lo tanto, un técnico medio en la materia habría derivado de manera evidente el objeto reivindicado a partir de las enseñanzas de los documentos D1, D2 o D3.

Por lo tanto, la solicitud en estudio no cumple con el requisito de nivel inventivo establecido por el artículo 18 de la Decisión 486.

C. Resumen

En conclusión los requisitos de patentabilidad de la presente solicitud podrían encontrarse afectados así:

No.	Documento	Reivindicaciones afectadas	Requisito afectado
D1	EP 0 638 304 A1	1 a 10	Novedad y nivel inventivo
D2	GB 2 277 867 A	1 a 10	Novedad y nivel inventivo

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No.	Documento	Reivindicaciones afectadas	Requisito afectado
D3	US 5,549,593	1 a 10	Novedad y nivel inventivo

Se anexa copia de las anterioridades mencionadas.

6. Notificación

En cumplimiento del artículo 45 de la decisión 486 de la Comisión de la comunidad Andina, se le indica que debe dar respuesta dentro del término de sesenta días contados a partir de la fecha de la notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e) del capítulo quinto del título primero de la circular única No. 10 de 2001.

ALIX CARMENZA CÉSPEDES DE VERGEL
Jefe de la División de Nuevas Creaciones

El anterior requerimiento fue notificado por fijación en lista, de fecha 01 DIC. 2005.

CONCEPTO TÉCNICO Número: 1891	EXAMINADOR TÉCNICO Código: 202043
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62-65



⑫ **EUROPEAN PATENT APPLICATION**

⑰ Application number: **93202087.8**

⑱ Int. Cl.⁴: **A61F 13/64**

⑲ Date of filing: **16.07.93**

⑳ Date of publication of application:
15.02.95 Bulletin 95/07

㉑ Inventor: **Schmitz, Christoph Johann**
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㉒ Designated Contracting States:
AT BE CH DE DK ES FR GB GR IE IT LI LU NL
PT SE

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Center N.V.
Ternsesteen 100
B-1853 Strombeek-Bever (BE)

㉔ Applicant: **THE PROCTER & GAMBLE**
COMPANY
One Procter & Gamble Plaza
Cincinnati
Ohio 45202 (US)

㉕ **Pant style diapers.**

㉖ The present invention relates to disposable absorbent articles or undergarments. The disposable articles are essentially designed as conventional disposable diapers however they are provided with an endless circular waistband (30) at one longitudinal end (23) of the article. The disposable article is applied to a wearer by slipping the endless waistband onto the hips such that the absorbent part of the article (14,15) is in front or behind the wearer and can be pulled between the legs to the opposing side and be attached (13) to the endless waistband.

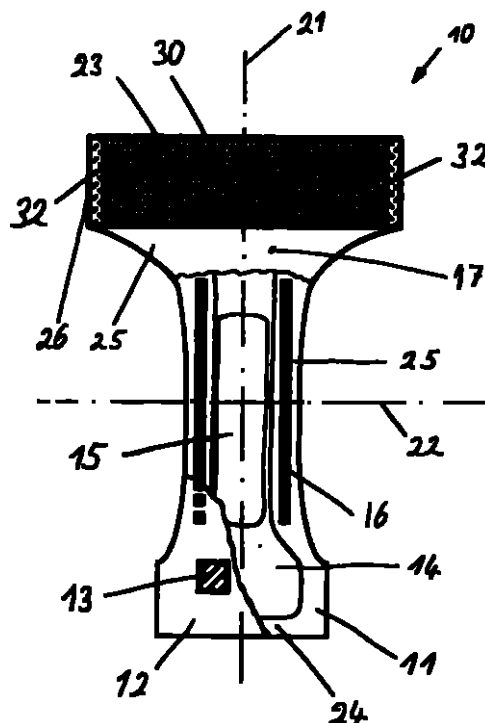


Figure 1

EP 0 638 304 A1

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to the respective countersurfaces. Alternatively and preferably mechanical cooperating closure means in particular hook/loop entanglement type systems can be used.

A particularly preferred design is shown in figure 2 and 3 where hook patch (13) cooperating with loops (not shown in the figures) are disposed on the outside of the backsheet (11) of the training diaper. The endless circular waste band is slipped over the legs and hip of a wearer (1) as shown in figure 3 and the second longitudinal end region is pulled between the legs of the wearer and through the inside of the endless circular waste band such that the hook patches (13) are covered by the oblong substrate (30). The oblong substrate (30), in this case preferably on its inside, has a soft feeling compliant loop material providing the counter mechanical closure system surface for the hook patches (13). The opposite type of closure is indicated in figure 1 where hook patches (13) are disposed on the topsheet of the training diaper (10) such that when used according to the above described procedure they have to entangle with the outside of the oblong substrate (30) and lack the benefit of being tightened additionally by the elastic circular tangential force of the endless circular waste band against the weaver (1).

It will be apparent for those skilled in the art that many combinations of materials and design modification are possible when using the beneficial principle of the present invention to combine a flat disposable absorbent article with an elastic endless circular waste band. In the following description materials useful in providing disposable absorbent articles according to the invention, especially training diapers are summarized by way of non-limiting examples.

The absorbent core (14) as well as the optional additional core patch (15) may be any absorbent means which is generally compressible, conformable non-irritating to the wearer's skin and capable of absorbing and retaining liquid such as urine and other certain body exudates. The absorbent core may be manufactured in a wide variety of sizes and shapes and from a wide variety of liquid absorbent materials commonly used in diapers and other disposable absorbent articles such as comminuted woodpulp, generally referred to as airlaid, craped cellulose wadding, meltblown polymers including coformed, crosslinked cellulose fibres, tissues including tissue wraps and tissue laminates, absorbent foams, absorbent sponges, super absorbent polymers, absorbent gelling materials or any other equivalent materials or combination of materials. Also the configuration and construction of the absorbent core may be varied. For example the absorbent material may have varying caliper zones, a hydrophilic gradient, a super absorbent gradient,

lower average density and lower average basis weight acquisition zones. It also may comprise one or more layers or substrates as shown in figure 1. The total absorbent capacity of the absorbent article should be compatible with design exudate loading and the intended use of the absorbent article.

Also the size and shape of the absorbent core should be varied to accommodate the expected wearer's ranging from infants to adults. Preferred absorbent core designs have been disclosed in US patents 4,810,878; 4,873,402; 4,888,231; 4,834,735; 4, 885,915; 4,781,710; 4,800,458. The preferred absorbent core design provides a crosslinked cellulose patch (15) essentially without super absorbent on top of a mixture of airlaid plus super absorbent polymer and comprising more than 30% super absorbent polymer in the absorbent core (14) as described in EP-A-512010.

The backsheet is impervious to liquids (e.g. urine) and can be provided as a single sheet or as a laminate of two or more layers. The liquid imperviousness of the backsheet can for example be provided by an impervious layer which is preferably manufactured from a thin plastic film, preferably a thermoplastic film, although other flexible liquid impervious materials may be used. Whether the backsheet consists of a single or several layers, it should be flexible. As used herein, the term "flexible" refers to materials which are compliant and which will readily conform to the general shape and contours of the human body. The backsheet prevents the exudates absorbed and contained in the absorbent core from soiling articles which contact the absorbent article such as clothes, bed-sheets and undergarments. The backsheet may thus comprise polymeric films such as thermoplastic films of polyethylene or polypropylene, or composite materials such as a film-coated nonwoven material. For economic, aesthetic, and ecological reasons, the part of the backsheet (30) providing liquid imperviousness preferably has an average nominal caliper, i.e. calculated caliper, of less than about 0.051 mm, more preferably a calculated caliper of from 0.01 mm to 0.038 mm.

If provided as a multilayered laminate the backsheet preferably comprises a flexible polyethylene film. As used herein the term "polyethylene" film refers to films which are essentially made of polyethylene, however, it is understood that polyethylene film will contain a variety of additives to provide characteristics like opacity, strength requirements, color or any other desired characteristic that can be achieved through adding minor amounts of other substances than polyethylene into the films. The total amount of additives should be less than 45%, preferably less than 15%, by weight of film materials. Exemplary films for use in backsheets are manufactured by Tredegar Industries, Inc. of

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between the non elastic layers and this laminate is joined in discreet places. Hereby after being ring rolled the laminate provides an elastic region of no strain in its relaxed state. Maximum elongation is equivalent to the activation stretch length during ring rolling. Alternatively, mesh type elastic substrates e.g. with hydro entangled nonwoven fabrics, so called scrim material can be used to provide an oblong substrate particularly useful in the present invention.

A preferred characteristic of the material of the oblong substrate should be the ability to form autogenous bonds in combination with other thermo plastic material or as a combination of identical thermo plastic material to join the oblong substrate to the diaper portion. When using autogenous bonding to join the oblong substrate to the diaper portion instead of adhesive bonding, it is preferred to employ ultrasonic or deformation welding and preferably crimping (high speed deforming welding)

As indicated above the oblong substrate can be an elastic laminate comprising a nonwoven fibrous substrate such that the nonwoven fibres provide the loop surface of the releasable closure system in combination with hook patches discussed above. The elasticity should be such that it provides a comfortable but sufficiently stable placement on a wearer. In this respect it is preferred that the elongation of the endless circular waist band should be $XWZ\%$ of the original circumference of the waist band at an absolute force of WXN .

Claims

1. A disposable absorbent article having a longitudinal direction which defines first and second longitudinal end regions and a lateral direction which defines lateral side regions and said disposable absorbent article comprising an oblong substrate, said oblong substrate being disposed in lateral direction in said first longitudinal end region of said disposable absorbent article, said oblong substrate extending into both lateral side regions of said disposable absorbent article, said oblong substrate being joined to said disposable absorbent article in each said lateral side region such that said oblong substrate together with said first longitudinal end region forms an endless circular waistband, and said endless circular waistband comprises an elastic region, said elastic region provides at least tangential elasticity to said endless circular waistband.

2. A disposable absorbent article according to claim 1 such that said oblong substrate is joined to said disposable absorbent article along the lateral outside edge in longitudinal direction of said disposable absorbent article.

3. A disposable absorbent article according to any of the previous claims such that said oblong substrate is joined to said disposable absorbent article by an adhesive or autogenous bond of 3 mm to 30 mm width in lateral direction, preferably 5 mm to 15 mm width in lateral direction.

4. A disposable absorbent article according to claim 3 such that said autogenous bond is formed by ultrasonic or deformation welding, preferably by crimping.

5. A disposable absorbent article according to any of the previous claims such that said oblong substrate is disposed along the outside edge in longitudinal direction of said first longitudinal end region of said disposable absorbent article.

6. Disposable absorbent article according to any of the previous claims such that said first longitudinal end region is the rear end region of said disposable absorbent article.

7. A disposable absorbent article according to any of the previous claims such that said oblong substrate comprises said elastic region of said endless circular waistband.

8. A disposable absorbent article according to any of the previous claims such that said oblong substrate is an elastic laminate comprising a non-woven fibrous substrate.

9. A disposable absorbent article according to any of the previous claims such that said elastic region of said endless circular waistband is activated by thermal or mechanical action after said endless circular waistband has been formed.

10. A disposable absorbent article according to any of the previous claims such that said elastic region of said endless circular waistband provides said endless circular waistband with an elongation of at least $XYZ\%$ of original circumference of said endless circular waistband at an absolute force of said YXN .

11. A disposable absorbent article according to any of the previous claims such that said dis-

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possible absorbent article further comprises cooperating closure means allowing to releasably join said oblong substrate to the second longitudinal end region.

12. A disposable absorbent article according to claim 11 such that at least one of said cooperating closure means comprises an adhesive tape.

13. A disposable absorbent article according to claim 11 such that said cooperating closure means comprise mechanical attachment means.

14. A disposable absorbent article according to claim 13 such that said mechanical attachment means are of the hook-loop entanglement type.

15. A disposable absorbent article according to any of the claims 11 to 14 such that at least one of said cooperating closure means is provided on the inside of said endless circular waistband.

16. A disposable absorbent article according to any of the previous claims such that said disposable absorbent article is a diaper comprising a liquid pervious topsheet, a liquid impervious backsheet joined to said topsheet and an absorbent core disposed between said topsheet and said backsheet.

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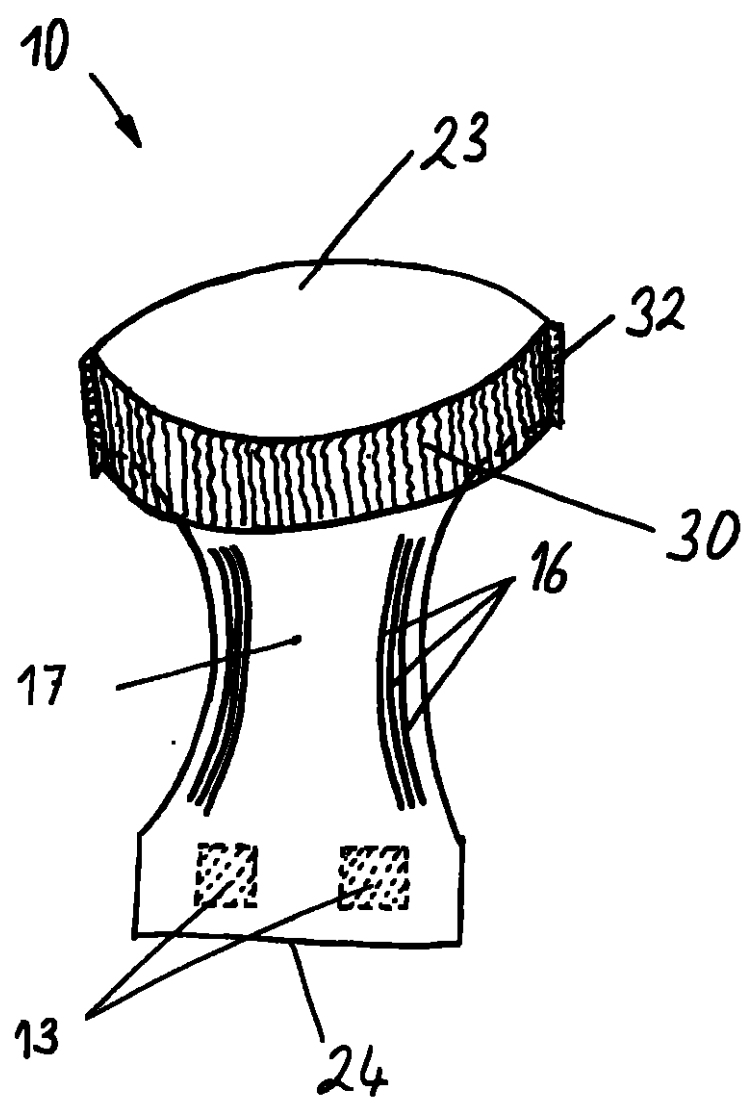
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66 ~~ts~~

EP 0 638 304 A1



Figur 2

67-28

(12) UK Patent Application (19) GB (11) 2 277 867 (13) A

(43) Date of A Publication 16.11.1994

(21) Application No 8408294.8

(22) Date of Filing 19.05.1994

(30) Priority Data

(31) 8801690

(32) 12.05.1993

(33) SE

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United Kingdom

(51) INT CL⁵

A61F 13/04

(52) UK CL (Edition M)

A61F V88C

(56) Documents Cited

GB 2216774 A

(58) Field of Search

UK CL (Edition M) A61F V88H V88A V88B1 V88B2

V88A V88B V88C V88X

INT CL⁵ A61F 6/44 13/06 13/02 13/04 13/06 13/74

13/76

Online databases:WPL,CLASIS

(54) Waist belt for absorbent garment

(57) A garment (1) comprises an absorbent section (2) and a waist belt (3) attached directly or indirectly thereto. The waist belt has two belt portions (7, 8) extending on either side of said absorbent section for securing to each other around a wearer of the garment. The particular handling characteristics of the belt portions of the waist belt (3) are significantly improved by manufacturing a belt stiffness of between 25 g and 90 g as measured by the modified version of test ASTM D 4032-82 circular band procedure.

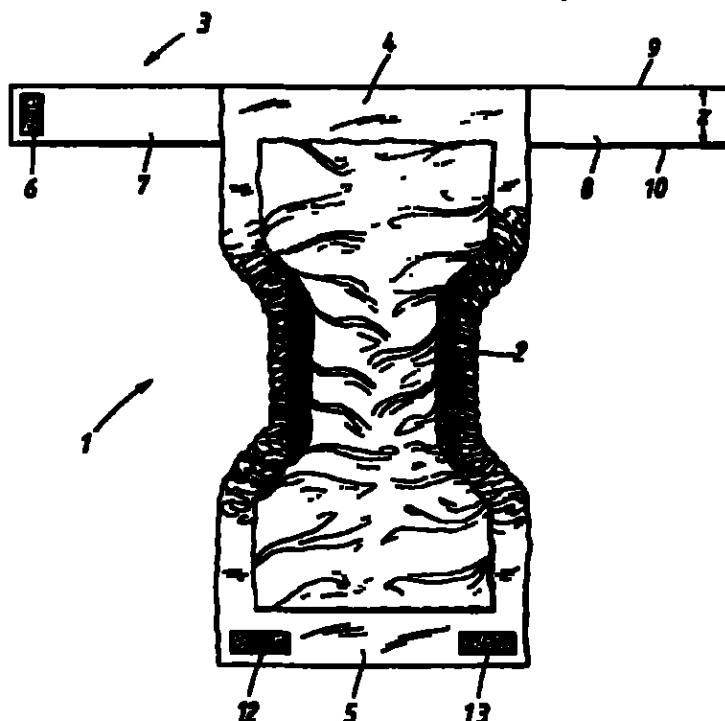


FIG.1

GB 2 277 867 A

The belt could be either one continuous belt 3 attached to the absorbent portion 2 at one end 4 thereof or could be two separate belt portions 7 and 8 each attached to a respective side of the end 4 (or 5). The manner of attachment per se is of no importance for the present application.

If it is desirable to impart elasticity to a belt made of two separate belt portions, it is conceivable that the end 4 of the absorbent portion 2 be elasticized.

The general appearance of the garment in the figures is known per se and thus no detailed explanation of all elements will be entered into. At one end of one part 7 of the belt 3 there is provided a flexible strip 6 of hook elements, of the hook and loop type of fastening means, which can either be secured to the belt part 8 (on the side not shown) or to a loop strip arranged on the belt part 8. Additional advantages, as explained below, will be obtained by particular dimensions and orientation of this strip. Whilst the belt is preferably substantially rectangular in shape comprising two laterally spaced longitudinal edges 9 and 10, between which the strip 6 will be attached, other shapes are conceivable. However, with a rectangular belt, the width of the belt should lie between 70 mm and 160 mm in adult incontinence applications.

Using such a belt, it is now possible to achieve good handling characteristics of the belt parts 7 and 8 even with the use of non-woven materials by selecting the range of stiffness according to the ASTM D 4032 modified test to lie between 25 g and 90 g. Below 25 g, the problem of wrinkling arises and this, as previously explained, is undesirable. Thus a free zone part of the belt (e.g. in the middle of one belt part 7) stiffness will lie in the stated range.

5 Claims

10 1. Garment (1) comprising an absorbent section (2) and
a waist belt (3) attached directly or indirectly thereto,
said waist belt having two belt portions (7, 8) extending
on either side of said absorbent section for securing to
each other around a wearer of the garment, c h a r a c t -
e r i z e d in that said waist belt (3) has a stiffness of
between 25 g and 90 g as measured by the modified version
of test ASTM D 4032-82 CIRCULAR BEND PROCEDURE.

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2. Garment according to claim 1, c h a r a c -
t e r i z e d in that said waist belt (3) has a width of
between 70 mm and 160 mm.

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3. Garment according to claims 1 or 2, c h a r a c -
t e r i z e d in that said waist belt consists on at least
its outer side, when fitted, of a non-woven material.

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4. Garment according to claim 3, c h a r a c -
t e r i z e d in that said waist belt consists on both
sides of a non-woven material.

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5. Garment according to claim 4, c h a r a c -
t e r i z e d in that said waist belt consists of only one
non-woven material piece.

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6. Garment according to any preceding claim,
c h a r a c t e r i z e d in that the stiffness of the
waist belt, as measured by the modified version of test
ASTM D 4032-82 CIRCULAR BEND PROCEDURE, lies between 30 g
and 55 g and most preferably between 35 g and 50 g.

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7. Garment according to any preceding claim,
c h a r a c t e r i z e d in that the absorbent section
(2), at its end (5) remote from the end (4) at which the
belt (3) is attached, is provided with hook element strips
5 (12, 13) of a hook and loop type fastener for attachment of
said remote end (5) to the waist belt at spaced locations,
and in that the connection of said hook element strips to
said waist belt has a shear strength of 1 Ncm² or more,
though preferably greater than 15 Ncm², and a peel strength
10 of between 0.1 - 2.0 Ncm⁻¹, preferably 0.2 - 0.8 Ncm⁻¹.

8. Garment according to any preceding claim,
c h a r a c t e r i z e d in that one of said two belt
portions (7, 8) has a hook element attachment strip
15 attached thereto (6, 15, 16, 17) for securing one belt
portion to the other belt portion, said attachment strip
being elongate and lying with its larger dimension in the
belt width direction whereby said larger dimension has a
length of between 25 % and 75 % of the belt width (z).

20 9. Garment according to any preceding claim,
c h a r a c t e r i z e d in that said waist belt (3) is
a continuous belt attached to said absorbent section so as
to leave two belt portions (7, 8) each extending from a
25 respective side of said absorbent section.

10. Garment as claimed in claim 1 substantially as
hereinbefore described with reference to and as
illustrated in Figure 1 of the accompanying drawings.

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US005549593A

United States Patent [19]
Ygge et al.

[11] **Patent Number:** **5,549,593**
[45] **Date of Patent:** **Aug. 27, 1996**

[34] **DEVICE FOR THE SUPPORT OF AN ABSORBENT ARTICLE**
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[21] **Appl. No.:** 942,116
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Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 653,521, Jan. 30, 1991, abandoned, which is a continuation of Ser. No. 399,495, Sep. 6, 1989, abandoned.

Foreign Application Priority Data

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[52] **U.S. Cl.** 604/391; 604/392; 604/395; 604/396; 604/402
[58] **Field of Search** 604/358, 385.1, 604/385.2, 386, 387, 391-402; 128/891, 98.1, DIG. 18; 2/DIG. 6, 300, 301, 304, 307, 309, 311, 312, 318, 323, 336, 337, 338

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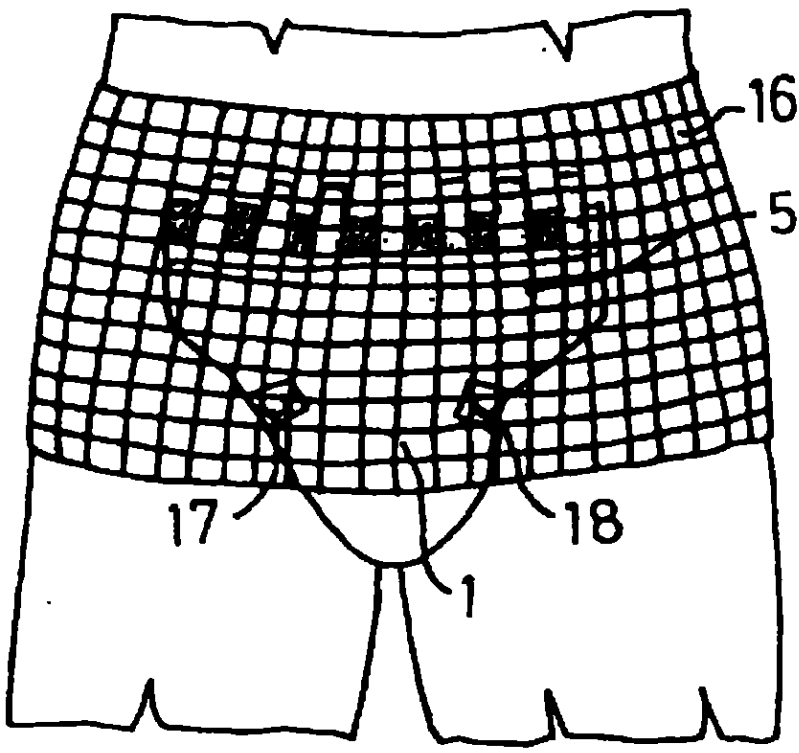
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[57] **ABSTRACT**

The combination of a absorbent article such as an incontinence protector, a diaper or the like, and a waist belt for supporting the absorbent article. The waist belt and absorbent article have coacting hook members and apertures thereon by which the diaper and the waist belt are releasably secured to each other.

8 Claims, 3 Drawing Sheets



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the bands 8,9. Such waist belts are shown in FIGS. 2 and 3. The waist belt 24 of FIG. 2 is made of plastic or textile and comprises a hook or loop tape element 25 along its inside whereas the waist belt 13 of FIG. 3 is made in the form of an elastic netting and comprises on its inside a row of hook or loop tape elements 26 spaced from each other along the circumference of the belt. In order to facilitate application, the waist belts can be opened and closed with the aid of fastening means 14, 15 which in the exemplary embodiment also are hooks or loops type closures.

A waist belt 16 can be made wide enough, as in FIG. 4, to overlap the diaper 1 during use for holding it tightly pressed against the wearer's body. In this manner the diaper will remain more securely in position reducing thereby the risk of leakage past the diaper edges. With a wider waist belt 16, however, additional points of attachment 17, 18 may be required between the diaper and the waist belt. In the exemplary embodiment, such points of attachment 17, 18 are arranged at the groin region of the wearer.

In FIG. 5 A,B a diaper 19 is shown which is identical to the diaper shown in FIG. 1 except that the bands 20A, 21A and 20B, 21B, respectively, provided with hooks or loops tape elements are attached to the ends of diaper 19 on the side which in use faces the wearer, i.e. the side containing the liquid permeable inner layer 2. In such a case the cooperating tape elements on the waist belt must of course be placed on the outer side thereof. FIGS. 6 and 7 disclose such waist belts 11 and 12, respectively, having tape elements 22 and 23, respectively, of different lengths extending spaced from each other along the circumference of the waist belt. Then tape elements 22 and 23 extend substantially over the whole width of the belt. For belts of inelastic material, a continuous tape element can be used but in order not to impair in a too great extent the elasticity of a belt of elastic material a row of mutually spaced tape elements is preferred for such belts.

Preferably, the application of a diaper and the inventive waist belt onto a user's body takes place in the following manner: The waist belt is applied around the user's waist whereafter the rear end of the diaper is affixed to the forward portion of the waist belt. The belt is then rotated around the user's waist until the diaper has moved halfway around and is left suspended behind the user's back.

The forward free end of the diaper is finally brought up from between the user's legs and is attached to the waist belt across the user's belly. Since all twisting or bending movements of the body can be avoided throughout the procedure, even persons with disabled backs and legs would be able to put on and change diapers without help.

The diapers and waist belts described in the foregoing can be considered as merely exemplifying some embodiments of the inventive concept. A plurality of modifications are conceivable within the scope of the patent claims.

What is claimed is:

1. In combination, an absorbent article having a forward end and a rear end, and a waist belt for supporting said absorbent article, said waist belt and said absorbent article having cooperating hook and loop fabric tape elements thereon by which said absorbent article and said waist belt are releasably secured to each other, said hook fabric tape elements being provided on one of said waist belt and said absorbent article, and said loop fabric tape elements being provided on the other of said waist belt and said absorbent article, wherein said belt comprises a continuous piece of elastic material completely open at top and bottom and having substantially equal width along its entire length, a

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plurality of said tape elements being arranged in a row spaced from each other along said waist belt and extending over substantially the whole width of said belt, said tape elements on said absorbent article extending over the whole width of said forward and rear ends thereof.

2. In combination, an absorbent article having a forward end and a rear end, and a waist belt for supporting said absorbent article, said waist belt and said absorbent article having cooperating hook and loop fabric tape elements thereon by which said absorbent article and said waist belt are releasably secured to each other, said hook fabric tape elements being provided on one of said waist belt and said absorbent article, and said loop fabric tape elements being provided on the other of said waist belt and said absorbent article, wherein said belt comprises a strip of material completely open at top and bottom and having substantially equal width along its entire length, a plurality of said tape elements being arranged in a row spaced from each other along the circumference of said waist belt and extending over substantially the whole width of said belt, said tape elements on said absorbent article extending over the whole width of said forward and rear ends thereof.

3. A combination according to claim 2, wherein said waist belt comprises reopenable fastening elements.

4. In combination, an absorbent article having a forward end and a rear end, and a waist belt for supporting said absorbent article, said waist belt and said absorbent article having cooperating hook and loop fabric tape elements thereon by which said absorbent article and said waist belt are releasably secured to each other, said hook fabric tape elements being provided on one of said waist belt and said absorbent article, and said loop fabric tape elements being provided on the other of said waist belt and said absorbent article, wherein said belt comprises a strip of material completely open at top and bottom and having substantially equal width along its entire length, one said tape element extending along the circumference of said waist belt and extending over substantially the whole width of said belt, said tape elements on said absorbent article extending over the whole width of said forward and rear ends thereof.

5. A combination according to claim 4, wherein said waist belt comprises reopenable fastening elements.

6. A combination according to claim 4, wherein said strip of material has two ends, said one tape element being attached to the inside of said belt, a second said tape element being attached to the outside of said strip at one end thereof.

7. In combination, an absorbent article having a forward end and a rear end, and a waist belt having substantially equal width over its entire length for supporting said absorbent article, said waist belt and said absorbent article having cooperating hook and loop fabric tape elements thereon by which said absorbent article and said waist belt are releasably secured to each other, said hook fabric tape elements being provided on one of said waist belt and said absorbent article, and said loop fabric tape elements being provided on the other of said waist belt and said absorbent article, wherein said waist belt is made of elastic material and, on the outside, comprises a row of said tape elements spaced from each other along the circumference of said waist belt, each of said tape elements extending over substantially the whole width of the belt.

8. In combination, an absorbent article having a forward end and a rear end, and a waist belt having substantially equal width over its entire length for supporting said absorbent article, said waist belt and said absorbent article having cooperating hook and loop fabric tape elements thereon by which said absorbent article and said waist belt are releas-