



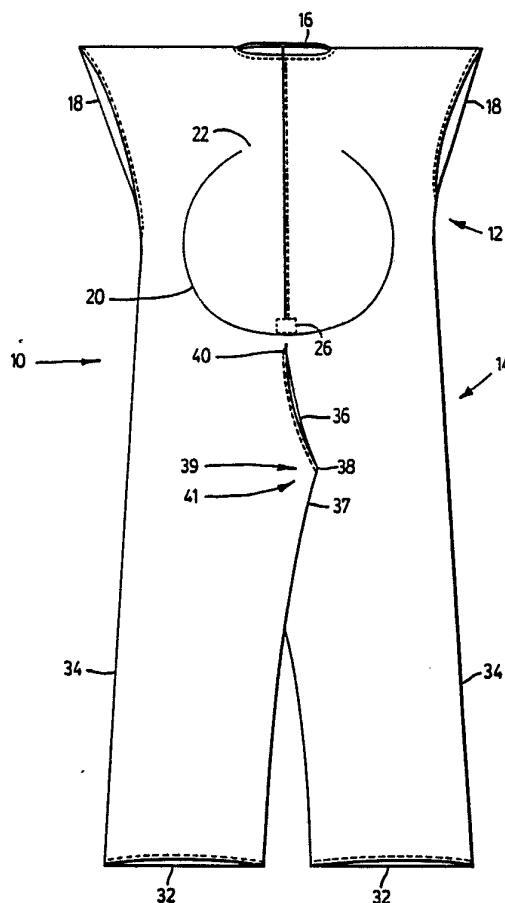
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification ⁵ : A41D 13/12</p>	<p>A1</p>	<p>(11) International Publication Number: WO 92/04836 (43) International Publication Date: 2 April 1992 (02.04.92)</p>
<p>(21) International Application Number: PCT/CA91/00328 (22) International Filing Date: 16 September 1991 (16.09.91) (30) Priority data: 583,635 17 September 1990 (17.09.90) US (71)(72) Applicant and Inventor: DOYLE, Maureen [CA/CA]; 296 Mill Road, Unit C7, Etobicoke, Ontario M9C 4X8 (CA). (74) Agent: ROGERS, BERESKIN & PARR; 40 King Street West, 40th Floor, Toronto, Ontario M5H 3Y2 (CA). (81) Designated States: AT, AT (European patent), AU, BB, BE (European patent), BF (OAPI patent), BG, BJ (OAPI pa- tent), BR, CA, CF (OAPI patent), CG (OAPI patent), CH, CH (European patent), CI (OAPI patent), CM (OA- PI patent), CS, DE, DE (European patent), DK, DK (Eu- ropean patent), ES, ES (European patent), FI, FR (Euro- pean patent), GA (OAPI patent), GB, GB (European pa- tent), GN (OAPI patent), GR (European patent), HU, IT (European patent), JP, KP, KR, LK, LU, LU (European patent), MC, MG, ML (OAPI patent), MR (OAPI pa- tent), MW, NL, NL (European patent), NO, PL, RO, SD, SE, SE (European patent), SN (OAPI patent), SU⁺, TD (OAPI patent), TG (OAPI patent).</p>		<p>Published <i>With international search report.</i></p>

(54) Title: EXAMINATION GARMENT

(57) Abstract

The present invention provides a garment for use in patient examinations where particular examinable areas remain covered until they are individually accessed or until the patient is placed in an examining position. The garment comprises an upper portion (12) for receiving and covering the patient's upper body, and a trouser portion (14) for receiving and covering the patient's lower body. There is also provided upper access means (20, 28) located on the upper portion (14) for exposing an upper examinable area, and lower access means (36) located on the trouser portion (12) for exposing a lower examinable area.



+ DESIGNATIONS OF "SU"

Any designation of "SU" has effect in the Russian Federation. It is not yet known whether any such designation has effect in other States of the former Soviet Union.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	ES	Spain	MG	Madagascar
AU	Australia	FI	Finland	ML	Mali
BB	Barbados	FR	France	MN	Mongolia
BE	Belgium	GA	Gabon	MR	Mauritania
BF	Burkina Faso	GB	United Kingdom	MW	Malawi
BG	Bulgaria	GN	Guinea	NL	Netherlands
BJ	Benin	GR	Greece	NO	Norway
BR	Brazil	HU	Hungary	PL	Poland
CA	Canada	IT	Italy	RO	Romania
CF	Central African Republic	JP	Japan	SD	Sudan
CG	Congo	KP	Democratic People's Republic of Korea	SE	Sweden
CH	Switzerland	KR	Republic of Korea	SN	Senegal
CI	Côte d'Ivoire	LI	Liechtenstein	SU ⁺	Soviet Union
CM	Cameroon	LK	Sri Lanka	TD	Chad
CS	Czechoslovakia	LU	Luxembourg	TG	Togo
DE	Germany	MC	Monaco	US	United States of America
DK	Denmark				

Title: EXAMINATION GARMENT**FIELD OF THE INVENTION**

This invention relates to the field of medical equipment and in particular, to an examination garment for use by patients for examination purposes.

BACKGROUND OF THE INVENTION

Generally when a patient attends at their doctor's office or a medical clinic, they must undress at least partially in the examination room prior to being examined. This can be both a waste of time for the doctor waiting to examine the patient, as well as embarrassing for the patient disrobing in the presence of the doctor. The patient may also feel uncomfortable when required to maintain their state of undress throughout the examination. From the doctor's point of view, examinations may be accelerated if the patient is provided an examination gown to change into prior to meeting with the examining doctor. Unfortunately, from the patient's point of view, the conventional examination gown serves only to aggravate their discomfort.

Conventional gowns tend to be awkward for the patient to put on, and embarrassing for the patient to be seen in. The conventional hospital gown wraps around the patient's front and ties at the patient's back. Typically the patient needs assistance in tying the rear ties. The rear of the gown remains substantially open and reveals at least a portion of the patient's posterior. The gown is consistently unflattering and many patients, particularly male patients, feel foolish wearing a gown or dress-like garment. Consequently, the patient feels foolish and inferior prior to their examination.

The conventional gown does not alleviate any of the embarrassment a patient may feel during the examination. The conventional hospital gown has a solid front so that often the patient must still remove most of the gown in order that the doctor may examine particular areas. Breast examinations and gynecological examinations are examples of

- 2 -

situations where the patient is required to remove or lift up a substantial portion of the examination gown. Consequently, the patient is forced to maintain a state of substantial undress during the examination.

5 Medical garments, such as the one disclosed by F.E. Belcher in U.S. Patent 4,759,083, provide a partial solution to the problem posed by the conventional gown. This garment provides panels and parts with releasable closures such that certain panels and parts are selectively separated for
10 examination access while the garment is still being worn by the patient. Consequently, the patient is not inconvenienced by having to remove a substantial portion of the gown in order to be examined in one specific area. Nevertheless, for the purposes of certain examinations such as gynecological
15 examinations, a substantial portion of the garment must still be lifted or pulled out of the way in order for the doctor to properly examine the patient. Thus, the patient is placed in an inferior and embarrassing position by being forced to maintain a state of substantial undress during the
20 examination. In addition, as stated earlier, patients, and male patients especially, feel uncomfortable when wearing a gown or dress-like garment.

The practice of requiring a patient to wear such a gown for examination can be quite detrimental to the
25 patient, and can affect the quality of the examination. The patient may develop a feeling of inferiority when placed in a poorly fitting gown that exposes a substantial portion of the patient's legs and posterior. Such a feeling of inferiority can build a sense of resentment against the
30 doctor who ultimately will be examining the patient. The patient will remain tense during examination, and the examination itself consequently may be made more difficult.

In addition, if a patient feels uncomfortable during their examination due to the outfit they are required
35 to wear, and if ultimately the patient must lift or remove a substantial portion of the gown in order that they may be

- 3 -

examined, the patient may leave the examination in an embarrassed state and may be hesitant to voluntarily attend at a future examination. Given recent technological developments leading to early detection of various illnesses 5 including, for instance, certain forms of cancer, it is desirable that patients be encouraged to attend at regular examinations. Such attendance may be facilitated if the examination is carried out in a less objectionable way.

It is therefore desirable that an examination 10 garment be developed that more closely resembles an article of clothing that may be worn by both men and women. The garment should ensure the maintenance of the patient's dignity and sense of well being by substantially covering the patient's body and preventing undesired exposure of the 15 patient's private areas while providing proper access to examinable areas for the examining doctor. In addition, the garment should be inexpensive, durable, and fit a wide variety of sizes.

SUMMARY OF THE INVENTION

20 The present invention provides a garment for use in patient examinations where particular examinable areas remain covered until they are individually accessed or until the patient is placed in an examining position. The garment comprises an upper portion for receiving and covering the 25 patient's upper body, and a trouser portion for receiving and covering the patient's lower body. There is also provided upper access means located on the upper portion for exposing an upper examinable area, and lower access means located on the trouser portion for exposing a lower 30 examinable area.

Therefore, what is provided is a preferably one piece garment that substantially covers the patient's entire body. The garment resembles a jump suit or coveralls such that both male and female patients, including infants, may 35 feel comfortable wearing it. The garment features means for

- 4 -

accessing various examinable areas in a discreet fashion. Substantial portions of the patient remain covered while any one examinable area is exposed.

BRIEF DESCRIPTION OF THE DRAWINGS

- 5 Fig. 1 is a front elevation of an examination garment according to the present invention;
- Fig. 2 is a rear elevation of an examination garment according to the present invention;
- Fig. 3 is a front elevation of an examination
10 garment according to the present invention in use on a patient;
- Fig. 4 is a part sectional side elevation of an examination garment according to the present invention in use on a patient in an examining position;
- 15 Fig. 5 is an end elevation of an examination garment according to the present invention in use on a patient in an examining position;
- Fig. 6 is a front elevation of an alternative embodiment of an examination garment according to the
20 present invention; and
- Fig. 7 is a rear elevation of an alternative embodiment of an examination garment according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

- 25 An examination garment which is a preferred embodiment of the present invention is illustrated at 10 in Figs. 1 through 5. The upper portion for receiving and covering the patient's upper body is generally indicated at 12 and the trouser portion for receiving and covering the
30 patient's lower body is generally indicated at 14. Since the preferred embodiment features the examination garment 10 as a one piece outfit, it should be appreciated that the upper portion 12 and the trouser portion 14 are in fact regions of a single piece and are not separable pieces. Nevertheless,
35 it is conceivable that the examination garment 10 may be

- 5 -

provided in separate upper and trouser portions. An example of a separate trouser portion 14 is shown in Figs. 6 and 7.

The examination garment 10 may be inexpensively constructed using a durable fabric made of a cotton and 5 polyester blend as is known in the trade. Alternative fabrics including disposable fabric blends constructed substantially of paper may also be used.

Due to its nature as a loose fitting, full length 10 garment where sleeves need not be provided and where the trouser legs may be rolled to a desired height, the garment may be constructed as a "one size fits all" outfit. In cases where the garment is used on infants or young adults, it is of course conceivable that the garment be available in a variety of sizes.

15 The upper portion 12 has a neck opening 16 and arm openings 18. The preferred embodiment 10 is sleeveless, however the upper portion 12 could be constructed with sleeves.

The upper portion 12 has means for accessing 20 various examinable areas located on the patient's front and back. Typical examinable areas may include the patient's breasts, lymph nodes, or general back area. The upper access means may then be selectively opened to reveal the desired examinable area while the remainder of the patient's body 25 remains unexposed.

In the preferred embodiment, the access means for exposing the patient's front consists of a flap 20. The flap 20 hinges at the uppermost edge 22 of the flap opening 24 such that the flap 20 may be lifted or rolled upwards to 30 expose the examinable area as shown in Fig. 3. Alternatively, the flap 20 may hinge at the lowermost portion of the flap opening 24, in which case the flap 20 would drop downwards to expose the examinable area. The former flap embodiment is preferred to the latter because of 35 the tendency for the former flap 20 to hang in a closed position due to natural gravitational forces. Consequently,

- 6 -

the examinable areas remain covered until they are selected to be accessed.

A releaseable fastener 26 may be provided to retain the flap 20 in a closed position. In the preferred embodiment, the releasable fastener 26 consists of a hook-and-loop fastening mechanism such as the type sold under the trademark "VELCRO". A simple button fastener would also be quite adequate. Clearly, a wide range of releasable fasteners may be suitable for the intended purpose.

10 The access means for exposing the patient's back consists of a back slit 28. The back slit 28 runs from the neck opening 16 along the patient's spine to the waist region 30 of the examination garment 10. The back slit 28 is maintained in a closed position by means of a releasable 15 fastener 27 located at the neck opening 16. The releasable fastener 27 may consist of a hook-and-loop fastening mechanism, a button, or any of a wide range of releasable fasteners as discussed above. When the releasable fastener 27 is disengaged, the back slit 28 may be opened to reveal 20 the central portion of the patient's back from their neck to their waist.

The back slit 28 further provides an opening to allow the patient to don the examination garment 10. The one piece construction of the preferred embodiment necessitates 25 the provision of a suitable entry for the patient.

A small portion of the patient's back may be visible when the back slit 28 is held in a closed position by the releasable fastener 26. Generally patients do not tend to feel uncomfortable or embarrassed when their back is 30 partially exposed. Nevertheless, alternative embodiments that substantially cover the patient's back are conceivable where the means for exposing the patient's back consists of a flap similar to flap 20 which covers the patient's front. In case a flap is provided as access means for exposing the 35 patient's back, an alternative method of entering the examination garment 10 would be necessary. For example, the

- 7 -

garment may be of two pieces consisting of an upper portion and a trouser portion. Alternatively, a releasably fastened slit located along one side of the upper portion of the examination garment, or releasably fastened shoulder slits 5 located along the length of each shoulder of the upper portion may be used.

The trouser portion 14 has leg openings 32 located at the lowermost portion of each trouser leg 34. A separate trouser portion 14 as shown in Figs. 6 and 7 is an 10 alternative to the one-piece examination garment 10. The separate trouser portion 14 includes fastening means 35 for fastening the trouser portion 14 about the patient's waist. The fastening means are known in the trade and may include a draw-string belt or an elasticized waist band.

15 The trouser portion 14 has means for accessing various examinable areas located on the patient's lower body. Typical examinable areas may include the patient's groin area, or buttocks. The lower access means may then be selectively opened to reveal the desired examinable area 20 while the remainder of the patient's body remains unexposed.

In the preferred embodiment, the access means for exposing the patient's groin area consists of a crotch slit 36 that runs in place of what would be part of the seam 37 of the trouser portion 14. The crotch slit 36 passes from a 25 point 38 on the inside thigh portion 39 of one leg 34 of the trouser portion 14, through the crotch 40 to a point 38 on the inside thigh portion 39 of the other leg 34. A greater area of the patient's groin will be exposed during examination the further down the thigh the crotch slit 36 30 begins. Accordingly, the length of the crotch slit 36 may be selected to suit the desired amount of exposure.

The crotch slit 36 should remain closed so that the groin area remains unexposed until the patient is placed in what is commonly known as the examining position. There 35 are a number of known forms of the examining position, one of which is shown in Figs. 4 and 5 and which may be referred

- 8 -

to as the reclined examining position. Basically, the reclined examining position requires the patient to lay on their back with their back either flat or in a slightly raised position. The patient's legs are bent at the knee and typically the feet are placed on supports referred to as stirrups in order to assist the patient in maintaining the examining position. The patient's legs are spread and sometimes raised slightly to expose the groin area. The reclined examining position is typically used by gynecologists who have specialized apparatus for placing the patient in such a position. A general practitioner may similarly place their patient in a reclined examining position on a regular examination table.

In order that the patient's groin area remains unexposed until the patient is placed in an examining position, excess fabric 41 may be provided in the region of the trouser portion 14 immediately surrounding the crotch slit 36. When provided with the excess fabric 41, the trouser portion 14 would somewhat resemble a standard jodhpur design except that the excess fabric 41 is located at the inside thigh portion 39 rather than the outside thigh portion of the garment. When the garment 10 is laid flat, the excess fabric 41 located at the inside thigh portion 39 of one leg 34 will at least partially overlap the excess fabric 41 located at the inside thigh portion 39 of the other leg 34 as may be seen in Figs. 1, 2, 6 and 7. When the garment is being worn by the patient the excess fabric 41 tends to contact and overlap to substantially cover the crotch slit 36 and consequently the patient's groin area. By placing the patient in an examining position the excess fabric 41 surrounding the crotch slit 36 is drawn apart to expose the patient's groin area, as may be seen in Fig. 4.

To provide a sufficient amount of excess fabric 41 to allow a suitable overlap in order to cover the patient's groin area, it may be necessary to construct the garment 10 from four separate fabric blanks.

- 9 -

Alternatively, releasable fasteners as described earlier may be provided to ensure that the crotch slit remains closed until it is desired to reveal the examinable area.

5 Other embodiments of lower access means are conceivable where the means for exposing examinable areas located on the patient's lower body may consist of a flap or flaps similar to flap 20 which covers the patient's front.

It is to be understood that what has been
10 described are preferred embodiments of the invention. The invention nonetheless is susceptible to certain changes and alternative embodiments fully comprehended by the spirit of the invention as described above and the scope of the claims set out below.

- 10 -

I CLAIM:

1. A garment for use in patient examinations, where particular examinable areas remain covered until they are individually accessed or until the patient is placed in an
5 examining position, said garment comprising:
an upper portion for receiving and covering the patient's upper body;
a trouser portion for receiving and covering the patient's lower body;
10 upper access means located on said upper portion for exposing an upper examinable area; and
lower access means on said trouser portion for exposing a lower examinable area.
2. A garment as claimed in claim 1, further
15 comprising releasable fastening means for releasably fastening at least one of said access means in a closed position.
3. A garment as claimed in claim 1, wherein at least one of said upper access means and said lower access means
20 includes a flap.
4. A garment as claimed in claim 3, wherein said flap includes releasable fastening means for releasably fastening said flap in a closed position.
5. A garment as claimed in claim 2, wherein said
25 upper access means located on said upper portion includes a back slit for exposing the back of said patient, said back slit passing along the back of said garment from the neck of said garment to the waist region of said garment, said back slit being releasably fastened at said neck by said
30 releasable fastening means.

- 11 -

6. A garment as claimed in claim 1, wherein said lower access means located on said trouser portion includes a crotch slit for exposing the groin area of said patient, said crotch slit extending from the inside thigh portion of one leg of said trouser portion, through the crotch of said trouser portion to the inside thigh portion of the other leg of said trouser portion.

7. A garment as claimed in claim 6, which includes excess fabric surrounding said crotch slit which contacts to cover said crotch slit until the patient is placed in a reclined examining position.

8. A garment as claimed in claim 7, wherein, when said garment is laid flat, said excess fabric located at said inside thigh portion of one leg of said trouser portion at least partially overlaps said excess fabric located at said inside thigh portion of the other leg of said trouser portion.

9. A garment as claimed in claim 2, wherein said upper access means located on said upper portion includes at least one flap for exposing the front of said patient and a back slit for exposing the back of said patient, said back slit passing from the neck of said garment to the waist region of said garment, said back slit being releasably fastened at said neck by said releasable fastening means.

10. A garment as claimed in claim 9, wherein said access means located on said trouser portion includes a crotch slit for exposing the groin area of said patient, said crotch slit extending from the inside thigh portion of one leg of said trouser portion, through the crotch of said trouser portion to the inside thigh portion of the other leg of said trouser portion.

- 12 -

11. A garment as claimed in claim 10, which includes excess fabric surrounding said crotch slit which contacts to cover said crotch slit until the patient is placed in a reclined examining position.
- 5 12. A garment as claimed in claim 11, wherein, when said garment is laid flat, said excess fabric located at said inside thigh portion of one leg of said trouser portion at least partially overlaps said excess fabric located at said inside thigh portion of the other leg of said trouser
10 portion.
13. A garment as claimed in claim 12, wherein said flap is releasably fastened in a closed position by said releasable fastening means.
14. A garment for use in patient examinations, where
15 particular examinable areas remain covered until they are individually accessed or until the patient is placed in an examining position, said garment comprising:
a trouser portion for receiving and covering the patient's lower body; and
20 access means located on said trouser portion for exposing an examinable area, said access means including a crotch slit for exposing the groin area of said patient, said crotch slit extending from the inside thigh portion of one leg of said trouser portion, through the crotch of said
25 trouser portion to the inside thigh portion of the other leg of said trouser portion.
15. A garment as claimed in claim 14, which includes excess fabric surrounding said crotch slit which contacts to cover said crotch slit until the patient is placed in a
30 reclined examining position.

- 13 -

16. A garment as claimed in claim 15, wherein, when said garment is laid flat, said excess fabric located at said inside thigh portion of one leg of said trouser portion at least partially overlaps said excess fabric located at said inside thigh portion of the other leg of said trouser portion.

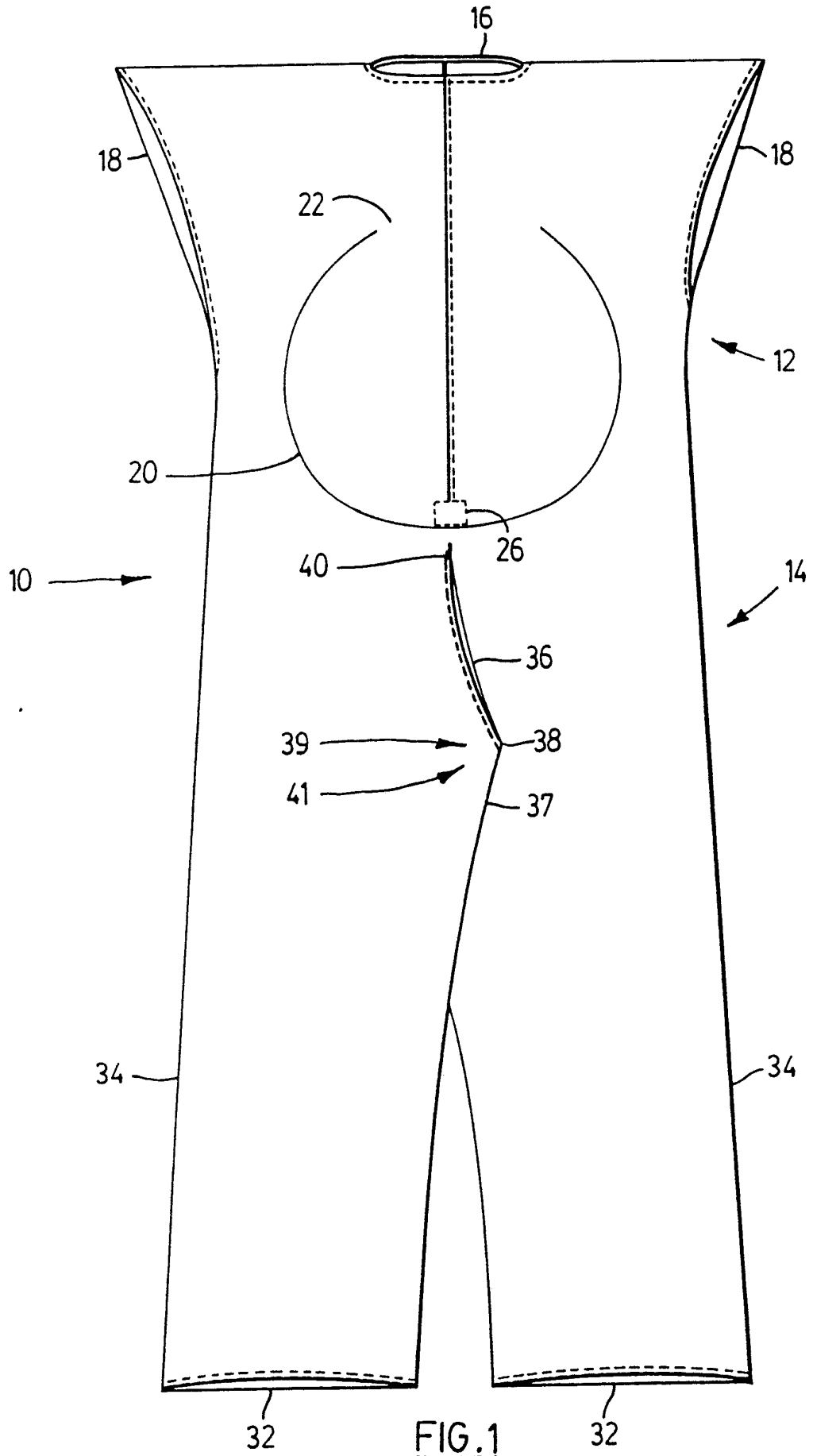


FIG. 1

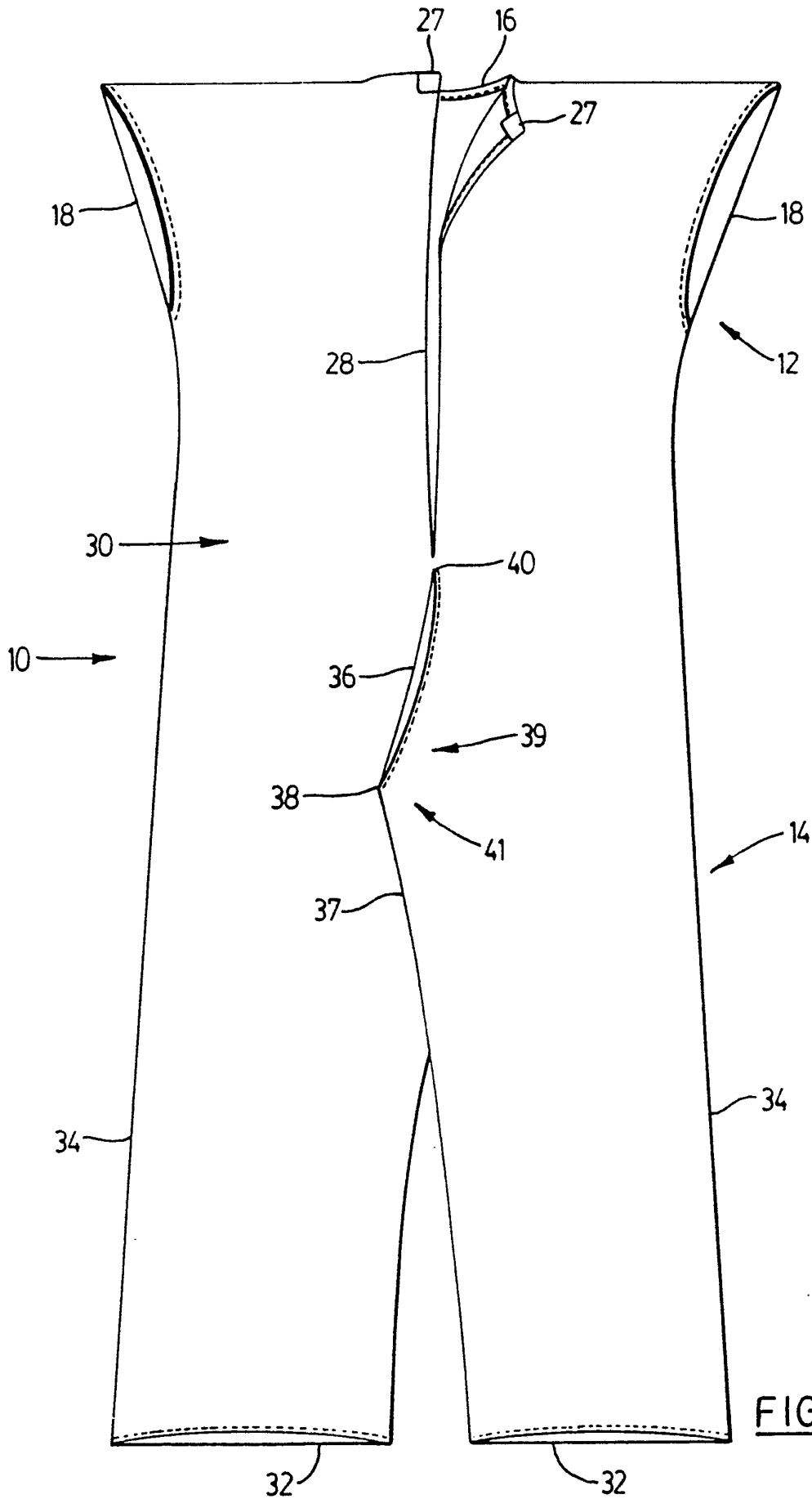


FIG. 2

3/6

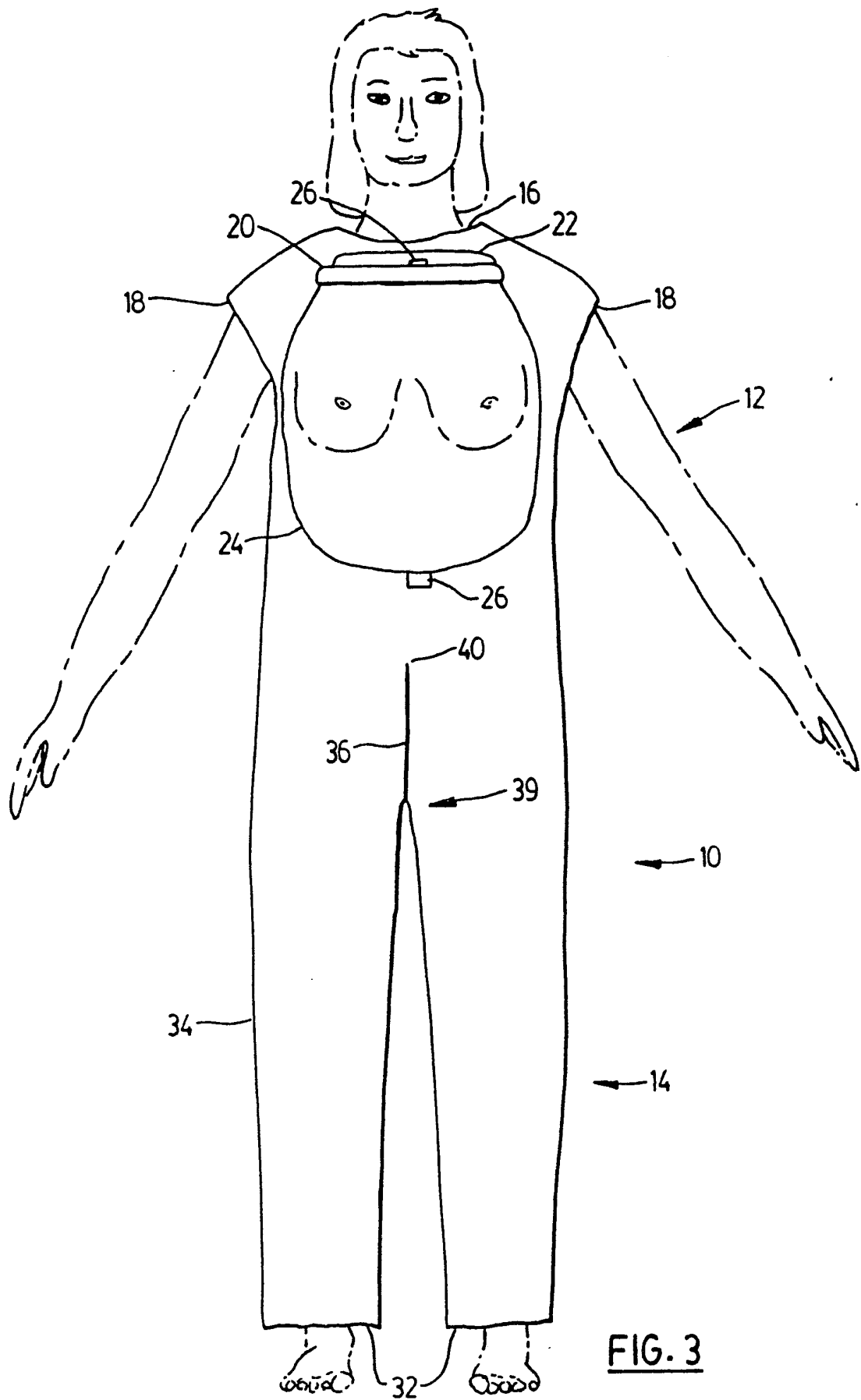


FIG. 3

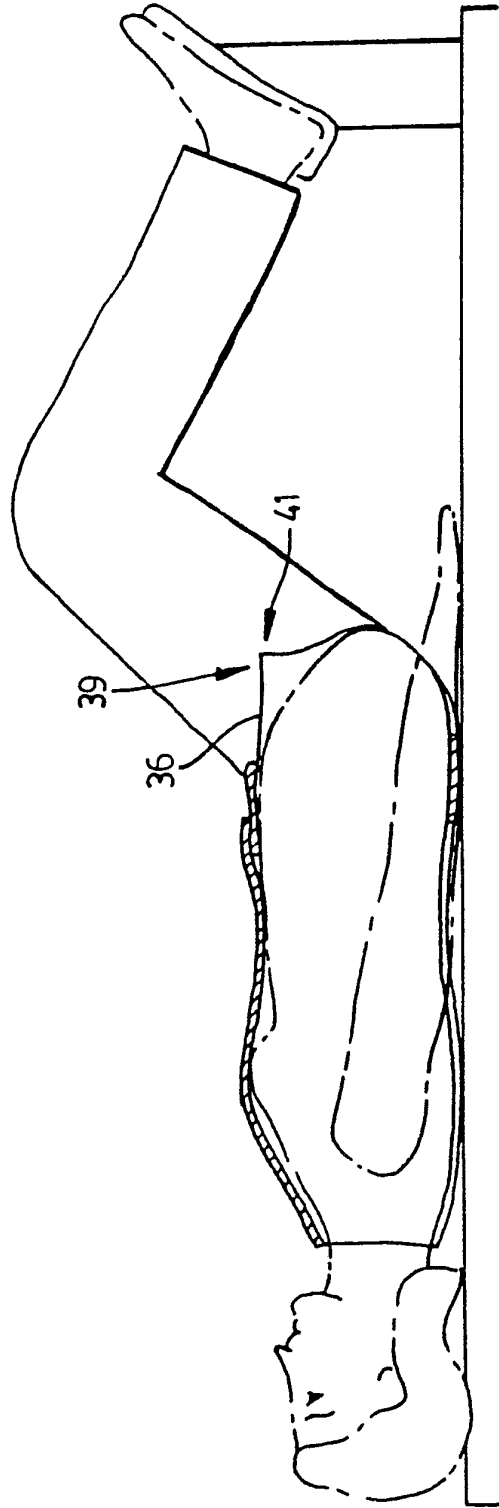


FIG. 4

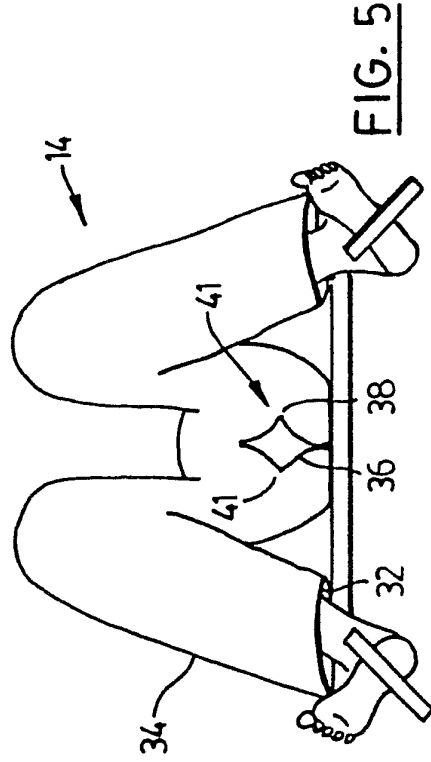


FIG. 5

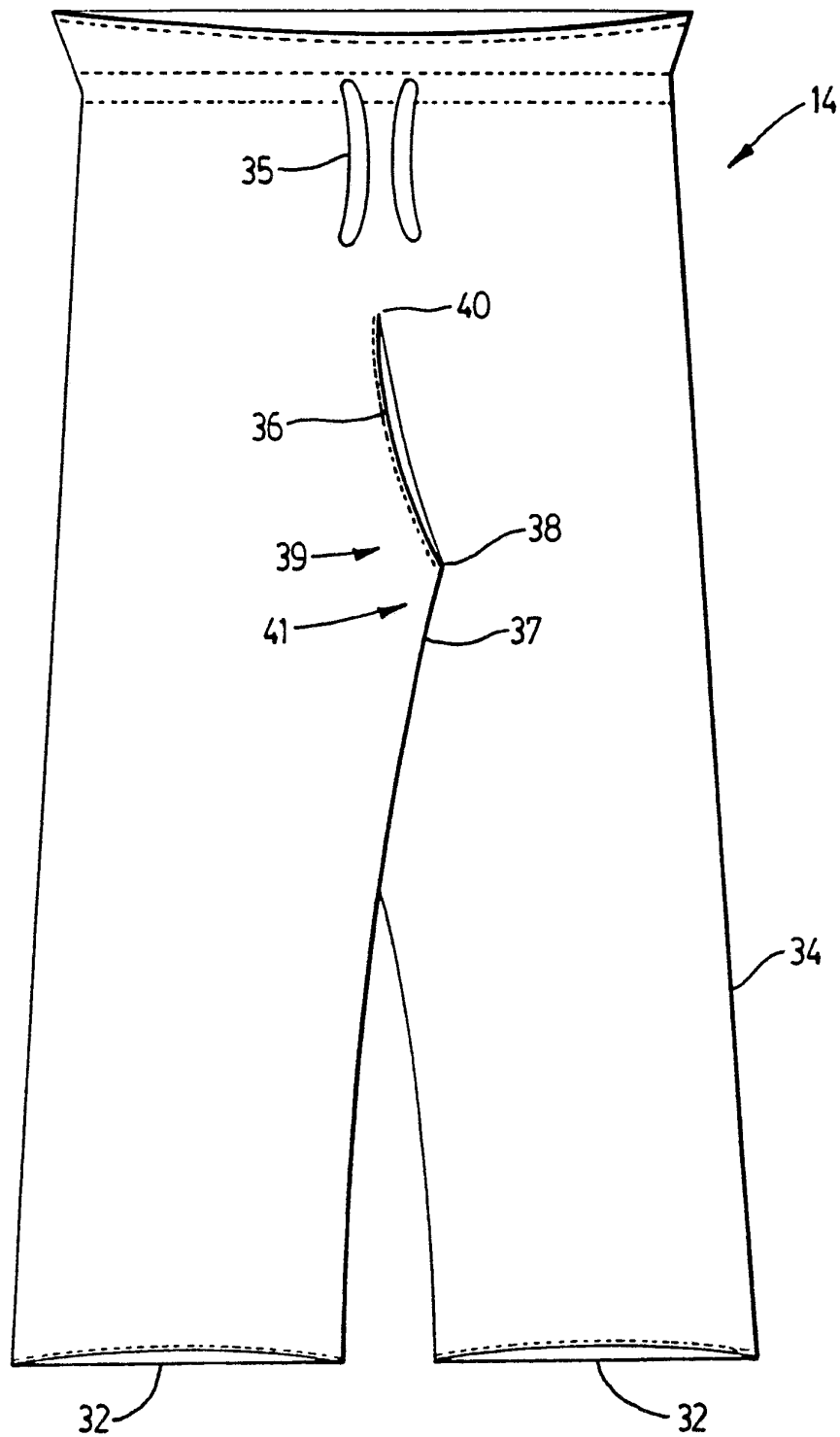


FIG. 6

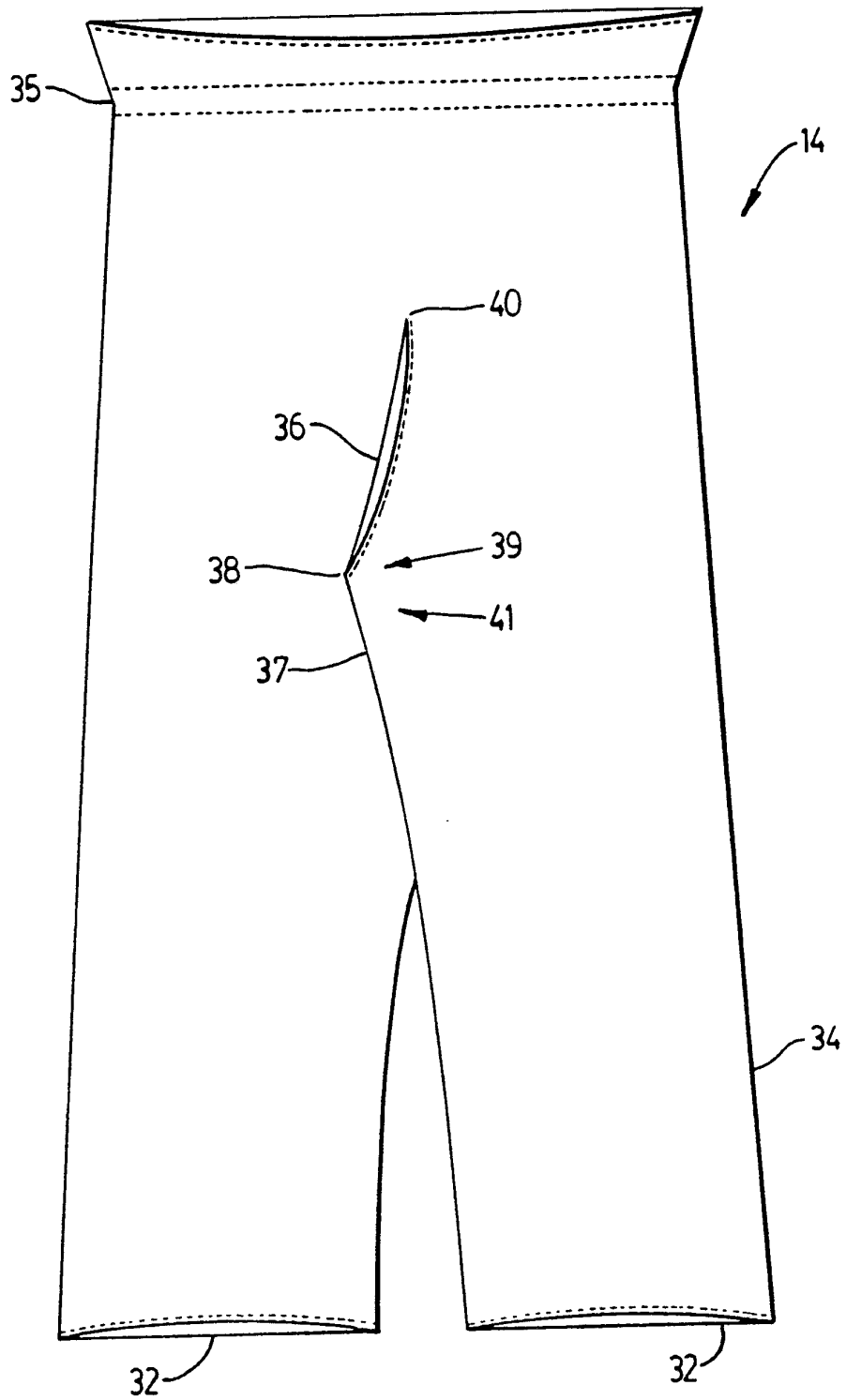


FIG. 7

INTERNATIONAL SEARCH REPORT

PCT/CA 91/00328

International Application No

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) ⁶		
According to International Patent Classification (IPC) or to both National Classification and IPC		
Int.Cl. 5 A41D13/12		
II. FIELDS SEARCHED		
Minimum Documentation Searched ⁷		
Classification System	Classification Symbols	
Int.Cl. 5	A41D ; A41B	
Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched ⁸		
III. DOCUMENTS CONSIDERED TO BE RELEVANT⁹		
Category ¹⁰	Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹²	Relevant to Claim No. ¹³
X	US,A,4 853 977 (V. S. FOREMAN) 8 August 1989 see the whole document ---	1-4,6-8, 10-16
X	EP,A,0 148 731 (PEGANI, ADRIANO) 17 July 1985 see page 6, line 8 - page 7, line 3; claims 1-3,6,8,10; figures 1-3 ---	1-4
A	US,A,4 759 083 (F. E. BELCHER) 26 July 1988 cited in the application see claims 1,5; figures 1-10 ---	1,2,4
A	US,A,4 300 241 (C.A. SHAULL) 17 November 1981 see claims 1,2; figures 1,2,7,9 ---	1,6
A	US,A,2 166 727 (B. CRUMPLER MOTT) 18 July 1939 see page 1, column 1, line 13 - line 16; claim 1 see figures 1-4 --- -/--	1,5-8, 10-12
<p>¹⁰ Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"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</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"&" document member of the same patent family</p>		
IV. CERTIFICATION		
Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report	
21 NOVEMBER 1991	16 DEC 1991	
International Searching Authority	Signature of Authorized Officer	
EUROPEAN PATENT OFFICE	FAIRBANKS S.A. <i>[Signature]</i>	

III. DOCUMENTS CONSIDERED TO BE RELEVANT (CONTINUED FROM THE SECOND SHEET)		
Category ^a	Citation of Document, with indication, where appropriate, of the relevant passages	Relevant to Claim No.
A	US,A,4 205 398 (P. BLUME) 3 June 1980 see column 2, line 3 - line 20 see column 2, line 52 - line 60; claim 1; figures 1-4	2,4,5,9
A	--- US,A,4 370 757 (B. D. RICHMOND) 1 February 1983 see claims 1-3; figures 1-3	6-8
A	--- DE,A,3 809 718 (S. STOLL) 5 October 1989 see figures 1-5	1

**ANNEX TO THE INTERNATIONAL SEARCH REPORT
ON INTERNATIONAL PATENT APPLICATION NO.**

CA 9100328
SA 50917

This annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information. 21/11/91

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US-A-4853977	08-08-89	None	
EP-A-0148731	17-07-85	None	
US-A-4759083	26-07-88	None	
US-A-4300241	17-11-81	None	
US-A-2166727		None	
US-A-4205398	03-06-80	None	
US-A-4370757	01-02-83	None	
DE-A-3809718	05-10-89	None	