

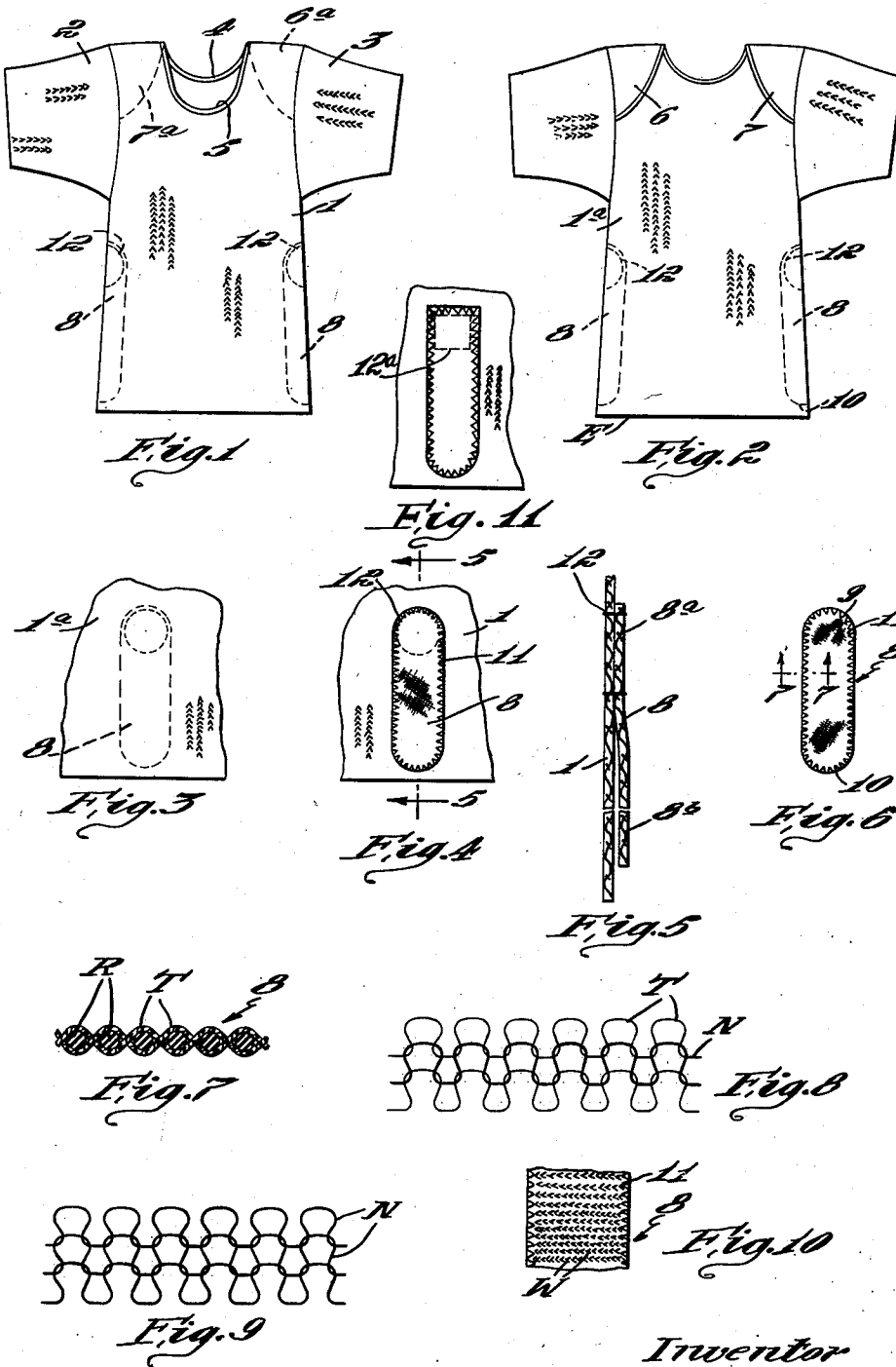
Dec. 9, 1952

D. E. SHEA

2,620,480

CHILD'S GARMENT WITH ATTACHED DIAPER TAB

Filed Feb. 17, 1950



Inventor
Dennis E. Shea
by Robert Cushman & Groves
Att'ys.

UNITED STATES PATENT OFFICE

2,620,480

CHILD'S GARMENT WITH ATTACHED
DIAPER TAB

Dennis E. Shea, Newtonville, Mass., assignor to
The Vanta Company, Inc., Waltham, Mass., a
corporation of Rhode Island

Application February 17, 1950, Serial No. 144,739

2 Claims. (Cl. 2-111)

1

This invention pertains to garments more especially to under garments (whether with or without sleeves) for infants and small children. The invention is here illustrated, for convenience, as embodied in a garment of the general type of that disclosed in the patent to LeConey No. 2,068,186 issued January 19, 1937, but it is to be understood that the invention is applicable to other types of under garment, for example to double-breasted tie-shirts, as disclosed in the patent to Fanta 1,000,390, August 15, 1911, or other under garments of customary kinds. The present invention is more especially concerned with the provision of an under garment comprising means for the convenient attachment of a diaper, in particular to a garment having diaper attaching tabs.

It has heretofore been proposed to provide an infant's shirt with reinforced or thickened areas for the reception of the diaper-attaching pins but it is somewhat difficult to pass the pin through such a thickened area, and the stresses to which the pin is subjected during use tend to tear or otherwise form holes in the material of the garment proper. It has also been proposed to provide the garment with tabs secured at their upper ends to the garment, either at its inside or outside, and having their lower portions freely depending and designed to receive the diaper-attaching pin. The provision of such tabs avoids the necessity of passing the pin through the garment proper or through unduly thick material, but such tabs have heretofore been customarily made of inextensible material, for instance woven textile tape, with the result that the drag of the diaper imposes an unduly heavy strain on the back muscles of the child and also tends to tear the garment proper at the point of attachment of the tape.

The principal object of the present invention is to provide a garment of the above type having diaper-attaching tabs but so designed as to avoid the transmission of undue stress from the attached diaper to the child's body. A further object is to provide an infant's undershirt having diaper-attaching tabs capable of substantial elongation in response to applied stress. A further object is to provide an infant's under garment having diaper-attaching tabs which are elastically yieldable. A further object is to provide a child's under garment having diaper-attaching tabs, comprising longitudinally extensible rubber elastic threads, so secured to the material of the garment proper as to distribute the stress at the point of attachment and there-

2

by to avoid tearing the garment. Other and further objects and advantages of the invention will be pointed out in the following more detailed description and by reference to the accompanying drawings wherein

Fig. 1 is a front elevation of an infant's under garment embodying the present invention;

Fig. 2 is a rear elevation of the garment of Fig. 1;

Fig. 3 is a fragmentary side elevation to larger scale showing the lower portion of a garment embodying the present invention;

Fig. 4 is a view similar to Fig. 3 but showing the garment as it appears at its inner side;

Fig. 5 is a fragmentary diagrammatic section, substantially on the line 5-5 of Fig. 4 but to greatly exaggerated scale;

Fig. 6 is an elevation of an attaching tab in accordance with one embodiment of the invention, the tab being shown before its connection to the garment;

Fig. 7 is a transverse section on the line 7-7 of Fig. 6 but to very large scale illustrating one kind of material useful in making such a tab;

Fig. 8 is a fragmentary elevation, diagrammatic in character and to very large scale illustrating another kind of material which may be used in making the tab;

Fig. 9 is a view similar to Fig. 8 but illustrating another kind of material;

Fig. 10 is a fragmentary front elevation diagrammatically illustrating a further modified form of tab, and

Fig. 11 is a view similar to Fig. 3 but illustrating an attaching seam of a modified and preferred construction.

Referring to the drawings, particularly to Figs. 1 and 2, an infant's under shirt is illustrated which in general is of the construction of that shown in the LeConey patent above referred to. Thus the body portion of the garment comprises the front portion 1 and the rear portion 2 usually integral parts of a tube of knitted material, although the front and back portions may be separate parts united by the side seams not shown. The garment has armholes which, as here illustrated, receive the sleeves 2 and 3. However, the garment may be sleeveless if desired. The body portion is provided with a neck opening defined by the curved edge 4 at the upper part of the rear portion 2 and by the curved edge 5 at the upper part of the front portion 1, these edges being bound or otherwise finished in customary manner. The front portion 1 has generally triangular extensions or

3

flaps 6 and 7 (Fig. 2) which extend up over the shoulder and down onto the back 1^a, overlapping similar extensions 6^a and 7^a of the rear portion 1^a which extend over the shoulders and down beneath the extensions 6 and 7 respectively. The lateral edges of these extensions or tabs are secured by stitching to the edges of the armseye openings.

In accordance with the present invention, the garment is provided with a plurality of diaper-attaching tabs, two such tabs 8 here being illustrated, one of these tabs being arranged at each side of the garment. Each of these tabs, as illustrated in Figs. 3, 4 and 6, is vertically elongate, preferably having curved upper and lower ends 9 and 10 respectively to give a finished appearance, and having its edges finished in any suitable manner, for example by overseaming as shown at 11. As herein illustrated these tabs are arranged at the inside of the garment, the upper end of each tab being spaced below the lower point of the corresponding armseye and the tabs being of such length that their lower ends 10 are just above the lower edge E of the body portion of the garment. The exact length of the tab is not material but it is preferred that the tab be concealed within the garment and obviously the tab should be sufficiently long to perform its intended function and to make the insertion of the diaper-attaching pin as easy as possible. As may be observed by inspection of Figs. 1 and 2, the tabs are attached to the body portion of the garment at locations directly below the respective armseyes, with the upper ends of the tabs spaced from the lowest point of the corresponding armseye, a distance which does not substantially exceed one-third the distance between the lower part of said armseye and the lower edge of the body portion of the garment. Moreover, the tabs are symmetrical with respect to the armseyes so that when the garment is folded flat, as shown in Figs. 1 and 2, each fold line substantially bisects the corresponding tab, or in other words, the longitudinal center line of each tab substantially bisects the corresponding armseye, whereby the pull of the diaper is distributed equally to the front and rear of the shoulder portion of the garment and is exerted close to the seam which unites the sleeve to the garment and which thus acts to transmit the pull to the shoulder.

As here illustrated, each tab is connected to the body portion of the garment by a sewed seam 12, each of these seams as here illustrated, being circular, the upper portion of each seam following and being concentric with the curved upper end of the tab. However, a seam which defines an enclosed area of different shape, for instance a square, may be used instead of the circular seam with generally similar results. By the employment of a seam of this general type, the stress transmitted from the tab to the body portion is very well distributed so that the possibility of tearing of the material of the garment proper by the load imposed by the tab is minimized.

As illustrated in Fig. 5, the upper end portion 8^a of the tab is attached to the garment, leaving the major portion of the tab, below the seam 12, free and depending so that its lower part 8^a is readily separable from the body portion of the garment to facilitate the introduction of the pin.

In accordance with the present invention, the tab 8 is of such material or construction as to permit it to elongate in response to applied stresses. Preferably it should be of elastic character so that after being elongated it tends to re-

4

sume its initial length. As illustrated in Fig. 10, the tab 8 consists of a length of ordinary knitted fabric, either rib or plain, having the wales W extending transversely, the margins of the tab being overseamed at 11, or otherwise finished to prevent ravelling, but without substantial limitation of stretchability. Knitted fabric with the wales running transversely in this manner is capable of greater vertical elongation than when the wales of the knitted material run vertically. A tab made of knitted material, will increase in length in response to stresses imposed by the diaper, thus avoiding undue strain upon the muscles of the child's back, at the same time relieving the body portion of the garment of undue stress.

While ordinary rib-knitted fabric such as just suggested is useful, it is preferable, as above suggested, to use a material which has the recovery characteristics of rubber elastic. Thus, as illustrated in Fig. 7 the material of the tab 8 may be a woven or broaded tape comprising longitudinal strands R of rubber or rubber-like material held together by the textile threads or yarns T. When such a material in the form of a tape is used in making the tab, with the rubber threads extending lengthwise of the tab, it is capable of elastic stretch with a tendency to elastic recovery, thus providing a springy action which, while avoiding undue strain upon the child, nevertheless keeps the diaper under proper tension and prevents it from shifting out of place.

Instead of the type of material illustrated in Fig. 7, in which the rubber strands extend longitudinally of the tab, material such as suggested in Fig. 8 may be employed, this material being a knitted fabric, here shown as plain knitted fabric, having alternate courses of textile yarn T and rubber or other elastic material N, the result being that this material is very stretchable in the direction of its wales. Tabs made of this material would have the knitted wales running longitudinally and like those made of the material shown in Fig. 7, would be inherently capable of elastic elongation and recovery. A further material is suggested in Fig. 9 which illustrates a plain knitted fabric in which all of the yarns are of elastically stretchable material such as rubber, synthetic rubber or the like; the knitted wales would run longitudinally of the tab when made of such material.

In use, the lower part of the body portion of the garment may be turned back to expose the tabs 8 and the diaper will be attached to the depending portions of the tabs in the usual way, by means of safety pins or equivalent attaching devices. If the tabs are of woven or braided material, the material is preferably open textured, thus facilitating the passage of the pins. If knitted material (which is readily penetrable by a pin) be employed, it may be of double thickness, if desired, to provide the desired strength and resistance to tearing out of the pin during use. Since the pin does not pass through the body portion of the garment, the formation of pinholes in the latter is avoided and as the tab is secured to the body portion by a seam of a length greater than the width of the tab the stresses are so distributed that tearing of the garment at this point is avoided. On the other hand the stretchability of the tab is such as to relieve the infant from undue and injurious strains.

While desirable constructions have herein been illustrated and described by way of example it

5

is to be understood that the invention is to be broadly inclusive of any and all modifications falling within the scope of the appended claims.

I claim:

1. An infant's garment designed to facilitate the pinning of a diaper thereto, said garment having armscyees and comprising, in combination with a body portion of knitted fabric having the wales thereof extending vertically of the garment, two diaper attaching tabs each arranged at the interior of the garment, each of said tabs being located directly below one of the respective armscyees and so that the longitudinal axis of each tab substantially bisects the corresponding armscyee, the upper end of each tab being spaced from the lowest point of the armscyee a distance which does not substantially exceed one-third the distance between the lowest point of the armscyee and the lower edge of the body portion of the garment, each tab being a narrow strip of material of such texture as readily to admit of its puncture by a pin and which is elastically stretchable in the direction of its length, the upper end portion of each tab being anchored to the body portion of the garment by a seam whose stitches pass through the material of the body portion of the tab, the major part of the

6

length of each tab, below its attaching seam, freely depending so that it is readily separable from the body portion of the garment.

2. An infant's garment according to claim 1 wherein each tab is a single ply of textile fabric, each tab terminating just above the lower edge of the body portion of the garment, and each tab comprising longitudinally extending rubber elastic threads, each tab being united to the body portion of the garment by a seam which bounds a rectangular area.

DENNIS E. SHEA.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
362,440	Goodman	May 3, 1887
471,349	Cooper	Mar. 22, 1892
1,125,985	Earnshaw	Jan. 26, 1915
1,495,134	Redmond	May 20, 1924
1,978,259	Gastrich	Oct. 23, 1934
2,103,133	Adamson	Dec. 21, 1937
2,511,809	Ryan	Jan. 13, 1950