This invention relates to an improved breech cloth for an infant.

Conventionally, such breech cloths have been in the form of a rectangular sheet of woven fabric, washable as a sheet but foldable into a triangular multi-ply diaper or a rectangular multi-ply diaper. Such diapers are conventionally affixed on the infant by means of safety pins with the ever present danger that the pins will become opened to pierce the skin or that the pins will be swallowed.

It has heretofore been proposed to use pressure sensitive adhesive areas on disposable paper diapers, or use pressure sensitive temporary fasteners attachable on diapers or snap fasteners on diaper garments and it has been proposed to pre-fold and stitch a sheet into a multi-ply diaper.

In this invention, the fastening means is preferably on the hook and pile type, wherein the hook side of one tape locks on the pile side of another tape but can be stripped therefrom by peeling. Such material is commercially available under the trademark "Velcro" of Velcro Corporation, New York, New York, and no claim is made thereto, per se, in this application.

One object of the invention, however, is to provide a reusable, washable diaper having a novel pattern of areas of hook and pile tapes which permits the diaper to adjust to the growth of an infant.

Another object of the invention is to provide a generally rectangular multi-ply diaper of washable material having a V shaped absorbent pad therewithin for drawing moisture away from the crotch area but not toward the navel area and having contact fastening means for affixing the diaper on an infant.

Another object of the invention is to provide a pre-folded, stitched rectangular, multi-ply diaper of washable fabric, having washable hook and pile fastening means therein in such a way that the diaper remains soft and the hooks cannot scratch or rub on any part of the skin of the infant.

A further object of the invention is to provide a multi-ply fabric rectangular diaper with one pair of laterally elongated hook tapes, two pairs of longitudinally spaced hook tapes and a multi-ply absorbent fabric pad of generally V shape whereby all of the parts may be saturated in water and whereby moisture is transferred by capillary action from the centre of the diaper to one short side thereof.

Still another object of the invention is to provide a rectangular infant's breech cloth having pile tapes at one short side, hook tapes on the opposite face of the other short side and at least one additional set of hook tapes intermediate of the length of the diaper, for varying the size thereof.

A still further object of the invention is to provide an infant's breech cloth having a novel pattern of areas of hook and pile tapes for fastening the same and having a V-shaped pad of absorbent fabric for drawing moisture away from the centre of the diaper toward one short side thereof.

Other objects and advantages of the invention will be apparent from the claims, the description of the drawing and from the drawing in which.

FIG. 1 is a front elevation of the diaper of the invention.

FIG. 2 is a side elevation in section on line 2--2 of FIG. 1, FIG. 3 is a front elevation of the diaper shown in FIG. 1 folded and fastened for an infant of small size, FIG. 4 is a side elevation of the folded diaper of FIG. 3, FIG. 5 is a view similar to FIG. 3 showing the diaper folded and fastened for an infant of larger size, FIG. 6 is a side elevation of the diaper shown in FIG. 5, FIG. 7 is a view similar to FIG. 3 showing a diaper having two opposed V-shaped pads, on a reduced scale, FIG. 8 is a view of a modification in which the novel pattern of hook and pile areas of the invention is applied to one of the panels of a transversely foldable sheet of washable fabric, FIG. 9 is an enlarged end view, in section on line 9--9 of FIG. 1, FIG. 10 is a view similar to FIG. 1 showing a diaper of the invention with contact fastening means of the pressure sensitive type, FIG. 11 is a view similar to FIG. 1 showing a diaper of the invention with elongated hook covered tabs cooperable with pile covered areas.

FIG. 12 is a view similar to FIG. 1 showing a diaper of the invention with one pair of hook covered areas and a pair of elongated diagonal pile covered areas, FIG. 13 is a view similar to FIG. 1 showing a diaper of the invention with contact fastener means of the snap type and with stitching along the sides but not along the ends.

As shown in FIG. 8, the reusable, infant's breech cloth 20 comprises a sheet 21 of absorbent washable fabric, preferably of the woven type and preferably rectangular, foldable along transverse fold lines indicated by the dotted lines 22, 23 and 24 to define four rectangular panels 25, 26, 27 and 28. In its preferred form the sheet 21 is prefolded and stitched into the multi-ply, rectangular, integral diaper 30, having an area equal to the area of a single panel 28 of the sheet 21, the folds being in the form best shown in FIGURE 9. A continuous line of through stitching 31 extends parallel to the edge of each short side 32 and 33 and parallel to each long side 34 and 35 of the diaper 30, to define a marginal strip 36 therearound and to secure said plies into an integral, unfoldable unit.

For example, as shown in FIGURES 3 and 4, when the hook areas 60 and 61 are used for small infants, they face inwardly toward the skin but the pile areas 40 and 41, while on the outside face, are folded inwardly to cover the hook areas. For larger infants the hook areas 50 and 51 are similarly covered by the turned-in pile tapes 40 and 41.

Pile material is secured proximate one short side 32 of diaper 30 in the form of a pair 29 of pile tapes 40 and 41, each covering a substantial area of an opposite corner 42 or 43 of one face 44 of the diaper. Each tape 40 and 41 is elongated to extend transversely toward the longitudinal centre line of diaper 30 and provide space for selective fastening of hook tapes at various positions therealong depending on the girth of the infant. The pile tapes are formed by a soft fuzzy pile 45 secured to a strip 46 of close mesh fabric, the latter being strong but not as soft and flexible as the material of the sheet 21. Preferably, therefore, the pile tapes 40 and 41 are firmly secured by through stitching 47 to the main body of diaper 30 defined by the marginal strip 36 and do not extend substantially into the strip 36. The marginal strip 36 thus remains soft and flexible to cushion the infant's skin against any contact with the edge of the backing strip 46.

Hook material is secured proximate the other short side 33 of diaper 30 in the form of a first pair 49 of hook tapes 50 and 51, each covering a substantial area of an opposite corner 52 or 53 of the other face 54 of
3, 144, 461

3. the diaper 30. The hook tapes 50 and 51 consist of a plurality of upstanding hooked elements 55, artificially fabricated to simulate the prickly surface of a burr, thistle or the like, and secured to a strip 56 of close mesh fabric, the elements 55 attaching themselves to the pile 45 but being pealable therefrom. The hook tapes 50 and 51 are preferably square and adapted to be covered by the pile 45, when located at various lateral positions on pile tapes 40 or 41 whereby the prickly elements are not exposed.

Additional hook material is secured to the face 44 of diaper 30 along each opposite long side 34 and 35, intermediate the length of the diaper in the form of a second pair 59 of hook tapes 60 and 61. Hook tapes 60 and 61 are equal in area to hook tapes 50 and 51 and preferably are spaced about four inches from the tapes 30 and 51 toward the center of the diaper 30. The hook tapes 50, 51, 60 and 61 are each firmly secured to diaper 30 by through stitching 57 and 62 and are located on the main body 48 of the diaper to permit the marginal strip 36 to remain soft and flexible.

The improved diaper of the invention preferably includes an absorbent pad 65 of generally V shape and consisting of a plurality of layers 70 of washable, absorbent, woven fabric, such as 66, 67 and 68. The pad 65 is located within the piles of the diaper 30 with the apex end 69 at the center 70 of the diaper and the opposite, or base end 71 of the pad 65 extending to proximate one of the short sides such as 72 of the diaper. The V shaped pad 65 is firmly secured in position within the folds of the diaper 30 by the stitching 47 of the pile tapes, by the line of stitching 31 or by the stitching 62 of hook tapes 60 and 61 if extending toward the short side 73.

The pad 65 is located on the front or back of the diaper depending on the sex of the infant as shown in FIG. 7, two pads 65 may be used if desired in a diaper 30. Capillary action tends to draw moisture from the apex portion of pad 65 toward the base portion to prevent chafing of the infant.

While the preferred embodiment of the invention is a prefolded, stitched, integral, rectangular diaper 30, as shown in FIG. 8, the breech cloth may be made and sold in unfolded form if desired. In such case the pile tapes 40 and 41 and the second pair of hook tapes 60 and 61 are on one face 73 of a panel 27 and the first pair of hook tapes 50 and 51 are on the face 73 of the adjacent panel 26. In use, the sheet 21 is folded into the form shown in FIG. 9 whereby the face 73 is exposed on one side of the diaper and the face 73 is exposed on the other side of the diaper.

The V 65 is V shaped rather than triangular, in order to provide the space 74 between the legs of the pad, this space being near the navel of the infant and not desired to become moist or wet. The apex end 69 and the legs of the pad 65 are preferably unstitched to prevent chafing and to maintain the soft flexibility of the main body of the diaper. Also to prevent chafing and discomfort to the infant, as best shown in FIGURE 9, the piles 66, 67 and 68 are each in a single plane and the pad 65 is of uniform thickness.

As shown in FIG. 10, the infant's breech cloth of the invention may be in the form of a rectangular multi-ply diaper 80 of absorbent washable sheet material 81 such as woven gauze or other suitable material. Two or more plies such as 82 and 83 may be cut to shape rather than folded from a single sheet and may be attached together by through stitching 84. The diaper 80 includes the intermediate portion 85 and the opposite end portions 86 and 87 as well as the V-shaped pad 88 corresponding to pad 65 and fixed within the piles 82 and 83 by the stitching 84. The apex 89 of pad 88 is proximate the centre of intermediate portion 85 and the base 90, or legs, thereof extend to proximate the edge of one of the end portions such as 86. The contact fastener means 92 on the diaper 80 includes the pile covered areas 93 and 94 and the hook covered areas 95, 96, 97 and 98 and the washable, absorbent, re-useable plies of the pad 88 are designated at 99, 100 and 101.

In FIG. 11 a diaper 105 corresponding to diaper 80 is shown wherein the contact fastener means comprises the pair of elongated pile covered areas 106 and 107 but the hook covered areas are on elongated tabs 108 and 109 at the other end of the diaper. The tabs 108 and 109 are stitched at 110 to the diaper with the hooks on the face of the tabs opposite to the diaper face on which the pile areas are secured. The flexible tabs 108 and 109 can be affixed at various zones along the pile areas 106 and 107 to adjust diaper 105 to the size of an infant.

In FIG. 12 a diaper 110 corresponding to diaper 80 is shown wherein only one pair of hook covered areas 111 and 112 is used and the pile covered areas 113 and 114 are elongated and extend diagonally of the face 115 of the diaper 110.

In FIG. 13 a diaper 120 is shown, similar to diapers 30 and 80 and including a V-shaped pad 121 within the piles of the absorbent washable material. The contact fastener means comprises a pair of male snap fasteners 122 and 124 and a pair of female snap fasteners 123 and 125, the first pair of female snap fasteners 123 and 125 at the other end portion of the diaper and, preferably, a second pair of female snap fasteners 126 and 127, corresponding to the hook covered areas 95 and 96. The snap fasteners may serve to secure the piles of the diaper to each other and the pad 121 may also be secured within the piles by snap fasteners. However, stitching is preferred in the form of two lines of through stitching 128 and 129 parallel to the sides 130 and 131 of diaper 120, and addition stitching 132 to hold the pad in place.

In the type shown in FIG. 11, the diaper 105 can be rolled or folded, and the tabs end, to the desired length and the tabs then affixed to the pile areas.

I claim:

1. A reusable infant's breech cloth comprising a sheet of absorbent washable fabric prefolded into a rectangular multiply diaper; a line of through stitching extending parallel to the edge of each long and short side of said diaper, said stitching securing said plies into an integral unit and defining a marginal strip therearound; a pair of pile tapes, each overlying a substantial area of an opposite corner of said diaper, and stitching 84 one edge of the shorter sides of said diaper and firmly secured thereto by stitching; a first pair of hook tapes, each overlying an opposite corner of the opposite face of said diaper along the other short side thereof and firmly secured thereto by through stitching, and a second pair of hook tapes, each overlying the face of said diaper to which the pile tapes are secured along the edge of one of the longer sides thereof, and each firmly secured thereto by through stitching, said first and second pairs of hook tapes being attachable selectively to said pair of pile tapes and stripable by peeling therefrom for adjusting the length of said diaper in accordance with increased growth of said infant.

2. A reusable infant's breech cloth as specified in claim 1 plus an absorbent pad of generally V shape mounted within the piles of said rectangular prefolded diaper and having a pair of legs with a space therebetween, the apex end of said pad being approximately at the centre of said diaper and the base end of said pad extending to proximate one of the shorter sides of said diaper, and through stitching securing said pad within said diaper, whereby said space overlies the navel area of said infant.

3. A reusable infant's breech cloth as specified in claim 2 wherein said absorbent pad is formed of a plurality of overlying plies of woven, absorbent fabric, each ply being in a single plane and said pad being of uniform thickness.

4. A reusable infant's breech cloth as specified in claim wherein said marginal strip is free of stitching for
forming a soft edge therearound and all of said tapes are secured by said through stitching on the main body of said diaper, at one short side thereof; a first pair of hook tapes, each overlying and secured to an opposite corner of the other face of said diaper at the other short side thereof and a second pair of hook tapes, each overlying and secured to an opposite long side edge portion of said one face of said diaper at a spaced distance toward said pile tapes from said first pair of hook tapes, whereby said diaper may be folded transversely and fastened with said second pair of hook tapes when said infant is small and unfolded and fastened with said first pair of hook tapes when said infant is larger.

6. A reusable, infant's breech cloth comprising a rectangular sheet of woven fabric prefolded into four equal panels and stitched into an integral, rectangular, multi-ply diaper; a pair of pile tapes, each overlying and secured to an opposite corner of one face of said diaper, at one short side thereof; a first pair of hook tapes, each overlying and secured to an opposite corner of the other face of said diaper at the other short side thereof and a second pair of hook tapes, each overlying and secured to an opposite long side edge portion of said one face of said diaper at a spaced distance toward said pile tapes from said first pair of hook tapes, whereby said diaper may be folded transversely and fastened with said second pair of hook tapes when said infant is small and unfolded and fastened with said first pair of hook tapes when said infant is larger.

7. A reusable, infant's breech cloth comprising a rectangular sheet of woven fabric prefolded, multi-ply diaper of washable material, a pair of pile type fastening tapes, each secured proximate an opposite corner of one face of one short side of said diaper; a pair of hook type fastening tapes, each secured proximate an opposite corner of the other face of the other short side of said diaper, and a pair of said hook type fastening tape, each secured proximate a longer side edge on said face of said diaper intermediate of the said short sides thereof.

8. A reusable, infant's breech cloth comprising a rectangular sheet of absorbent, washable fabric foldable laterally into a multi-ply diaper having opposite exposed rectangular faces; corner areas of pile tape material on one exposed face of said diaper along one short side thereof, corner areas of hook tape material on the opposite exposed face of said diaper along the other short side thereof and areas of hook material on said first named face of said diaper, intermediate of the space between the short sides thereof, said hook areas interlocking with said pile areas to form various sizes of breech cloth, while being entirely covered thereby and being peelable therefrom for removal of said breech cloth.

9. A reusable infant's breech cloth comprising a rectangular, integral, multi-ply diaper of absorbent, washable, sheet material having an intermediate portion and opposite end portions; a V shape absorbent pad fixed within the plies of said diaper with the apex thereof proximate the centre of said intermediate portion and the base thereof proximate the edge of one of said end portions, said pad having a space therein, adapted to overlie the navel area of said infant; a pair of elongated pile covered areas each on an opposite side of one said end portion; a first pair of hook covered areas each on an opposite side of the other said end portion, and a second pair of hook covered areas each on an opposite side of said other end portion, at least one pair of said first and second pairs of hook-covered areas being on the face of said diaper opposite to the face of said pair of pile covered areas.

References Cited in the file of this patent

UNITED STATES PATENTS

<table>
<thead>
<tr>
<th>Patent No.</th>
<th>Inventor(s)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,256,510</td>
<td>Young</td>
<td>Sept. 23, 1941</td>
</tr>
<tr>
<td>2,591,182</td>
<td>Miller et al.</td>
<td>Apr. 1, 1952</td>
</tr>
<tr>
<td>2,660,172</td>
<td>Titie</td>
<td>Nov. 24, 1953</td>
</tr>
<tr>
<td>2,808,831</td>
<td>Winslett</td>
<td>Oct. 8, 1957</td>
</tr>
<tr>
<td>2,827,052</td>
<td>Goodman et al.</td>
<td>Mar. 18, 1958</td>
</tr>
<tr>
<td>2,834,347</td>
<td>Connolly</td>
<td>May 13, 1958</td>
</tr>
<tr>
<td>2,970,597</td>
<td>Michel</td>
<td>Feb. 7, 1961</td>
</tr>
<tr>
<td>3,021,838</td>
<td>Fine</td>
<td>Feb. 20, 1962</td>
</tr>
<tr>
<td>3,081,772</td>
<td>Brooks et al.</td>
<td>Mar. 19, 1963</td>
</tr>
</tbody>
</table>

OTHER REFERENCES