March 16, 1948. H. S. CROFT 2,438,039

UNITARY SANITARY NAPKIN

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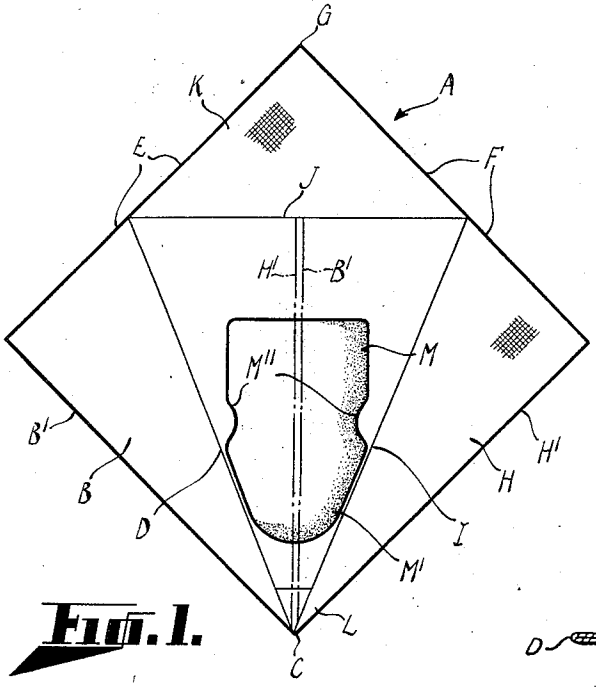


FIG. 1.

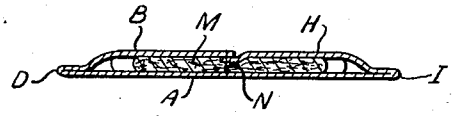


FIG. 3.

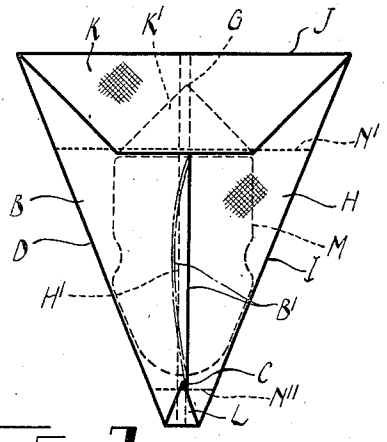


FIG. 2.

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UNITED STATES PATENT OFFICE

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UNITARY SANITARY NAPKIN

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5 Claims. (Cl. 128—284)

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This invention relates to sanitary napkins used upon infants and has for its object to provide relatively economical sanitary napkins that may be used with safety and comfort with infants and discarded as and when required.

It is customary, at present, to protect children by employing textile napkins which call for repeated laundering thus entailing considerable time and labour and, at times, causing much inconvenience when it becomes necessary to dry the napkins during inclement weather conditions.

By the present invention, the necessity for laundering is entirely dispensed with, the napkins being of such a character and of such reasonable cost that enables them to be completely discarded after use with consequential saving of time, labour and expense.

Furthermore, by using sanitary napkins in accordance with the invention, the outer garments of an infant are protected, and under normal conditions, such outer garments are prevented from becoming stained or wet during bowel evacuations and fluid excretions thereby enabling the use of the outer garments for relatively longer periods and, in that way, still further reducing the expenditure of time and labour in laundering operations.

The invention will be readily understood from the following description aided by reference to the accompanying drawings in which:

Figure 1 is a diagram showing one way in which a blank of gauze-like textile fabric may be folded in order to constitute a foundation element of a napkin and to enclose an absorbent pad.

Figure 2 is a plan view of a napkin illustrating a way of retaining an absorbent pad within the foundation element, whereby the pad may be removed, if so desired, and replaced by another pad.

Figure 3 is an enlarged cross section on line 3—3 of Figure 2.

A sanitary napkin in accordance with the invention includes a square, or other suitably shaped, foundation piece A of textile fabric such, for example, as gauze, butter muslin, cotton or like suitable material which is relatively inexpensive.

Referring more especially to Figure 1, a right-angled triangular side portion B of the foundation piece is folded back, in an inward direction, from one corner C of the foundation piece about a straight line D extending from corner C to a point about midway of one of the edges E, F between which the opposite corner G is formed.

An opposite right-angled triangular portion H

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is also folded inwardly in a similar manner about line I. The respective triangular portions B and H, when folded, thus combine to form a substantially isosceles triangle having its apex at corner C and its base J formed by the folded portions of side edges E and F. The edges B' and H' of the portions B and H are preferably overlapped slightly as indicated in Figure 1 to form closing flaps.

The triangular portion or flap K extending from corner G may then be folded along the base of the isosceles triangle, while the tip of the apex or corner portion L may be folded back as seen in Figure 2.

An absorbent pad M composed of "cotton-wool," or any other appropriate material such as wood or like cellulose, may be placed upon the blank before folding operations commence although it may be, if so desired, placed in position after folding has been completed. This pad is generally of oblong shape with one end portion M' (i. e. the portion destined to extend at the front of an infant) somewhat tapered and rounded, while the other end may be cut on the square.

Opposite side edges M'' of the pad may have recesses at positions where the pad is destined to extend between the legs of an infant.

Various means may be adopted to prevent inadvertent displacement of the pad within the folded foundation element.

According to Figure 2, the pad M although prevented from any substantial inadvertent displacement may be withdrawn from the envelope and replaced by another pad if so desired. To permit of such interchangeability, two transverse lines of stitching are employed but such stitching does not pass through the pad. Thus one line of stitching N' extends parallel with base J at a position slightly beyond the larger end of the pad M, while a second line of stitching N'' extends slightly beyond the smaller or tapered end of the pad. In this embodiment it is preferred for the outer extremity K' of flap K to be turned inwardly and backwardly to ensure that the flap is devoid of any exposed loose end. It will also be noted that stitching N'' extends across the turned back apex portion L.

It will thus be appreciated that edges B' and H', where they extend over the pad M are not secured together, and can be separated, as indicated in Figure 2, to permit of access to the pad-accommodating pocket formed between the lines of stitching N' and N'' and the side edges D and I so that a soiled pad may be removed and

a fresh pad inserted as and when desired. By such means, the envelope constituted by the foundation element, which is capable of ready laundering, may be repeatedly used with a fresh pad upon each occasion.

Instead of employing spaced lines of stitching as aforesaid for securing the inner and outer walls of the foundation element together, latex or any other suitable adhesive may be used for this purpose.

The improved napkin is suitable for complete disposal when required. Normally the bulk of the assembled napkin prevents the use of a water closet or toilet for disposal. However, this difficulty may be overcome by separating the absorbent pad from the foundation element by withdrawing the pad from its pocket through the access opening for independent disposal. The separate parts are capable of passing through the discharge pipe of the usual type of water closet or toilet without causing any blockage.

Another important advantage is that the absorbent pad may be readily withdrawn from its pocket in the foundation element without having to handle the soiled part of the inner wall of the foundation element which provides a continuous or unbroken surface which is not liable to cause chaffing or irritation to the user.

Having now described my invention what I claim as new and desire to secure by Letters Patent is:

1. A sanitary napkin or diaper comprising a foundation element of gauze like pervious fabric in the form of an isosceles triangle and having inner and outer walls secured together at two lines extending transversely and spaced lengthwise of the height of the triangle so as to form a pocket, an absorbent pad of disintegrable material removably seated in said pocket, said pocket having an access opening in said outer wall and extending lengthwise of the height of the triangle between said securing lines and which is normally closed by unattached overlapping flaps whereby the component parts of the napkin may be readily separated for independent disposal by withdrawing the pad from its pocket through said access opening without having to handle the soiled part of the inner wall.

2. A napkin according to claim 1, wherein the foundation element is constituted by a rectangular blank of textile fabric which is folded about two major folds extending in opposite directions from one corner of the rectangle to about midway of the side edges between which the opposite corner of the rectangle is formed so that the two side edges extending from said first mentioned corner are brought into adjacent relationship and extend from about the centre of the base of the triangle to the apex thereof, a triangular flap portion of the blank including the said opposite corner being folded inwardly about a line co-incident with the base of the triangle.

3. A napkin according to claim 1, wherein the foundation element is constituted by a rectangular blank of textile fabric which is folded about two major folds extending in opposite directions from one corner of the rectangle to about midway of the side edges between which the opposite corner of the rectangle is formed so that the two side edges extending from said first mentioned corner are brought into adjacent overlapping relationship and extend from about the centre of the base of the triangle to the apex thereof, a triangular flap or portion of the blank including the said opposite corner being folded inwardly about a line co-incident with the base of the triangle, the securing lines constituting rows of stitching, one row of stitching being substantially parallel with the base of the triangle and passing through a turned back edge portion of said triangular flap, while the other row of stitching extends near the apex of the triangle, both of said rows of stitching crossing said adjacent overlapping edge portions, the absorbent pad being located within the foundation element between the said two rows of stitching.

4. A napkin according to claim 1, wherein said absorbent pad is of elongated and substantially rectangular form with one end portion of tapered formation so as to fit within said pocket and wedge between the inclined opposite side edges of the foundation element whereby the pad is removably retained in its operative position without being secured to said foundation element.

5. A sanitary napkin or diaper comprising an envelope having inner and outer walls of pervious sheet material and being in the form of a triangle, an access opening in the outer wall extending longitudinally of the height of the triangle and which is normally closed by over-lapping flaps, said inner and outer walls being secured together along two lines which are spaced longitudinally of said access opening to form a pocket within the envelope, and an absorbent pad removably seated in said pocket by means of said access opening.

H. S. CROFT.

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