March 3, 1970 M. C. GALLAGHER 3,498,296

DIAPER PANTY AND THE LIKE

Filed Oct. 3, 1966

Fig 1.

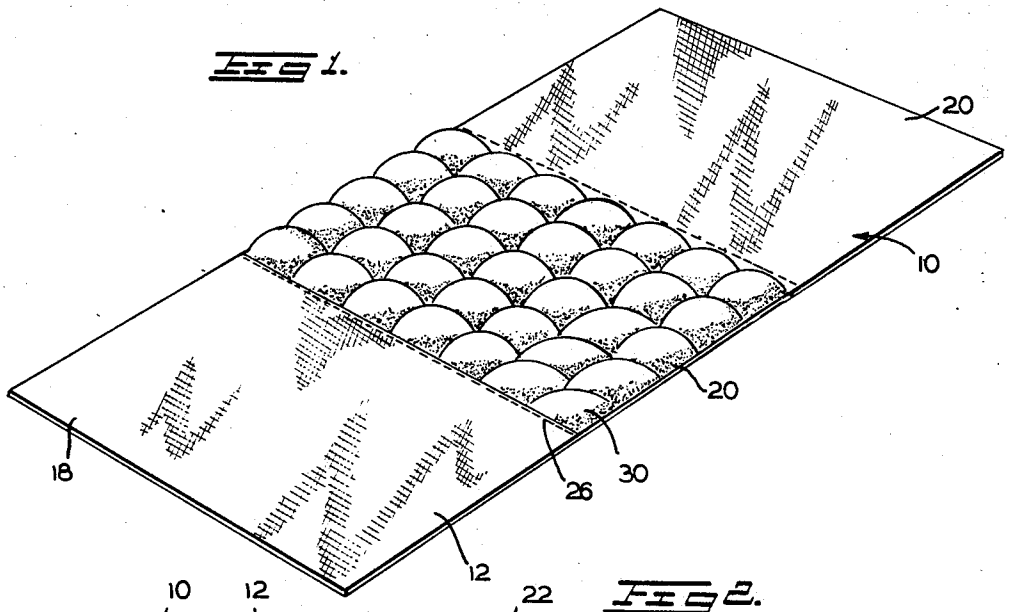


Fig 2.

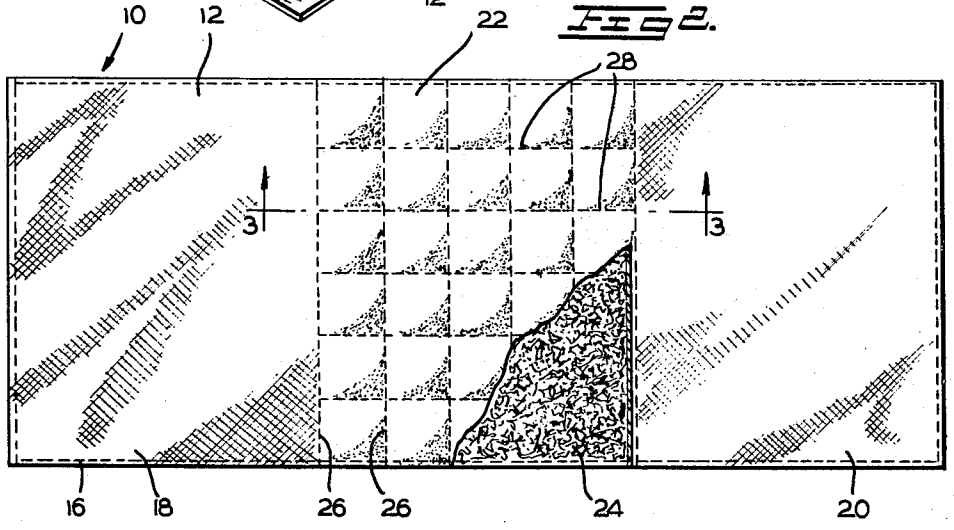
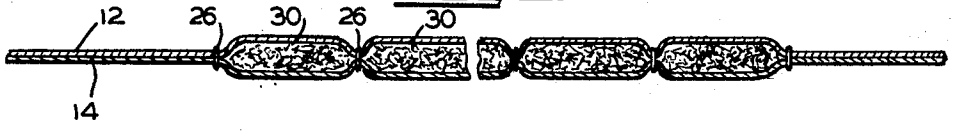


Fig 3.



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DIAPER PANTY AND THE LIKE

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U.S. Cl. 128—284 3 Claims

ABSTRACT OF THE DISCLOSURE

A diaper is provided consisting of a pair of opposed sheet-like elements at least one of which is water adsorbent. The pair of opposed sheets are divided into a central portion and a pair of end portions and the central portion is provided with a batt of non-water-wettable fibrous material such as Dacron and the fibrous material is generally immobilized in the central portion by suitable quilting.

The present invention relates to a diaper panty such as that used for infants, although it is not meant to limit the scope of the invention thereto since it is apparent that the diaper panty of the present invention may be utilized in other ways.

In accordance with the present invention, a diaper is provided that has the usual or conventional cotton or other absorbent layers, and is further provided with a portion or section that utilizes generally non-wetting fibers as the means for storing a large quantity of fluid at a position remote from the skin of the wearer.

It is an object of the present invention to provide a diaper panty or similar article which has a quilted batt of generally non-absorbent fibers disposed in the central portion of the diaper and secured between a double walled absorbent fabric diaper.

It is another object of the present invention to provide a double walled fabric diaper comprising two layers of cloth material such as cotton and the like between which is disposed a plurality of generally non-absorbent fibers which fibers are further disposed in a quilted arrangement so that the batt of fibers is maintained uniformly throughout the central portion of the diaper and will not inadvertently bunch up into one section or portion of the diaper.

It is yet another object of the present invention to provide a novel diaper that has a mat or mass of generally non-absorbent or hydrophobic fibers disposed in the area where the main liquid or fluid retaining function takes place along the large surface area of the fibers and such a diaper wherein the retained fluids can be easily removed or flushed therefrom when the diaper is washed.

It is another object of the present invention to provide a diaper having a central section or portion made of a batt of generally non-water-wetting fibers such as Dacron or nylon, or similar material wherein the liquid to be retained will stay upon the surface of the large number of fibers disposed in the batt so that the diaper may be readily washed to remove the retained liquid therefrom and wherein the washed article has fast drying properties.

Various other objects and advantages of the present invention will be readily apparent from the following detailed description when considered in connection with the accompanying drawing forming a part thereof and in which:

FIGURE 1 is a perspective view of the diaper embodying the present invention;

FIGURE 2 is a top plan view of the diaper of the present invention with a portion of the quilted central portion being cut away to illustrate the generally non-water-wetting fibers contained therein; and

FIGURE 3 is an enlarged section taken along the lines 3—3 of FIGURE 2.

Referring to the drawings, the reference numeral **10** generally designates the diaper panty of the present invention and is provided with two layers of absorbent fabric material or cloth such as cotton and the like comprising an upper or top layer **12** and a lower layer **14**. The upper and lower layers of cotton fabric material **12** and **14** are stitched together along the perimeters thereof as indicated by the dotted line **16** in FIGURE 2. The diaper is provided with outer sections or portions **18** and **20** adjacent the opposite ends of the diaper and a central section or portion **22**. In the illustrated form of the invention the three sections are substantially equal in area or size.

The central portion **22** is provided with a batt or mat of generally non-water-wetting fiber material **24**, as best seen in FIGURE 2. The fibrous material is preferably Dacron or nylon but it may comprise other similar materials having similar non-water absorbing characteristics and properties. Non-water-wetting fibers such as Dacron and nylon have the characteristic or property of being non-water absorbent from the standpoint that water generally does not penetrate the fibers. However, nylon or Dacron have the characteristic of permitting a liquid to wick along its surface and in this manner a batt of such fibrous material will retain or hold a large quantity of liquid upon its large surface area when disposed in a batt arrangement.

The central portion **22** of the diaper is quilted into a plurality of squares or a checkerboard arrangement by transversely extending rows of stitches **26** and longitudinally extending rows of stitches **28** to generally immobilize the fibers of the batt and to generally maintain the illustrated arrangement of the batt and the absorbent fabric material **12**.

Referring to FIGURE 3 it will be seen that the stitches **26** permit the central portion to be divided into, for example, individual small square batts or zones **30**. The provision of the quilted pattern provides a uniform distribution of the individual fibers of the batt so that it is maintained in a fixed position and the thickness of the diaper is generally uniformly maintained.

It is, of course, realized that any desired quilted arrangement may be used in the central portion of the diaper and the thickness of the batt of fibers may be variously changed from that illustrated in the drawing. Very satisfactory results have been obtained with a batt thickness of from about one-half to about three-fourths inch.

Thus from the foregoing description it is apparent that the present invention provides a novel diaper panty or garment that may be utilized in medical or surgical cases for adsorbing liquid by utilizing the principle of a wicking action on generally non-wettable fibrous batt material while at the same time maintaining the fibrous batt material between absorbent layers of material which are soft against the body such as cotton or other such similar fabric cloth material.

It is further apparent that the present invention provides a diaper panty that can be readily washed without the use of excessive detergent since the liquid retained in the diaper arrangement is disposed on the surface of the individual fibers and does not penetrate them as it normally does in the case of non-hydrophobic fibrous material.

While a preferred form of the present invention has been described and illustrated various modifications may be made therein without loss of the beneficial properties of the diaper, for example, the outer face of the diaper may comprise a water impervious sheet or a portion of

the outer fabric material may be coated or covered with a water impervious sheet material or composition.

What is claimed is:

1. A diaper and the like comprising two opposed sheets of cotton material divided into a generally quadrangular central portion and end portions, said central portion between said cotton sheet consisting solely of a quadrangular mass of non-water-wettable fibrous material, and quilting securing said fibrous material in said central portion between the opposed sheets of cotton.

2. The diaper of claim 1 wherein the mass of fibrous material comprises a batt disposed in a quilted arrangement in said central portion.

3. The diaper of claim 2 wherein the fibrous material consists of Dacron fibers.

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