April 28, 1970 L. A. HENDRICKS 3,508,549

SANITARY NAPKIN

Filed Dec. 26, 1968

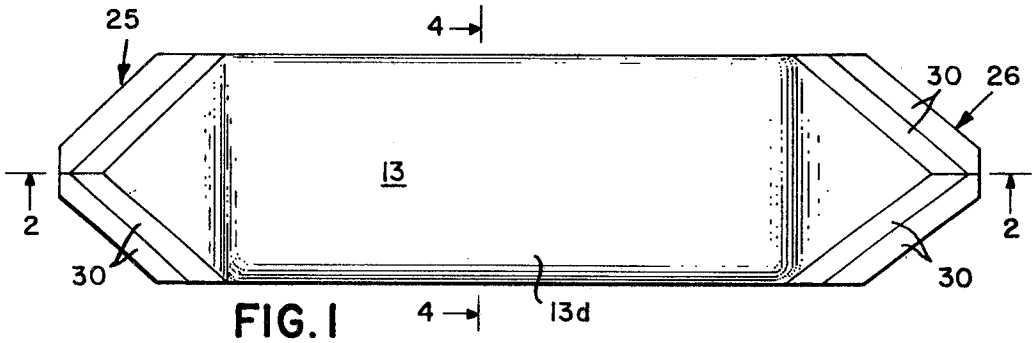


FIG. 1

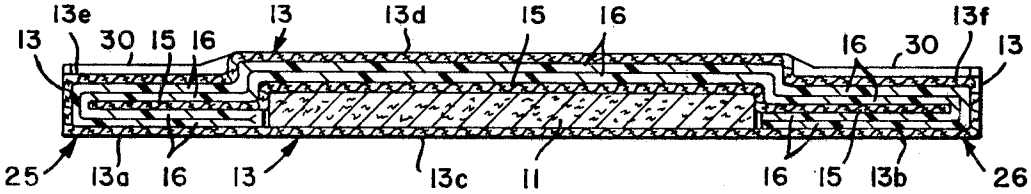


FIG. 2

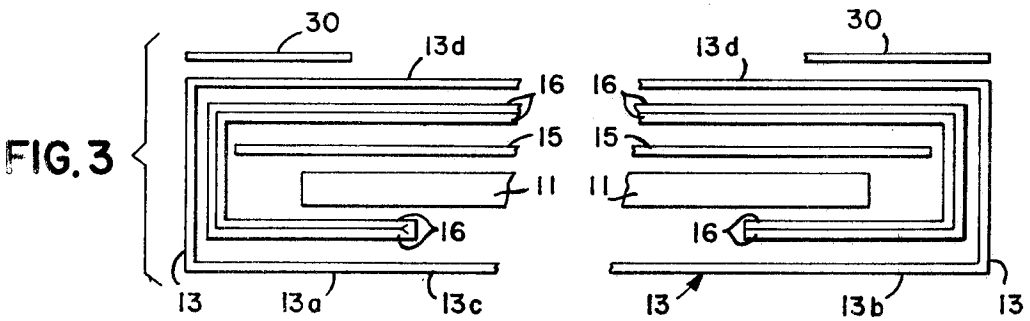


FIG. 3

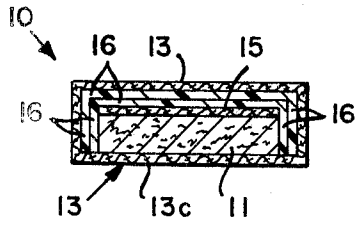


FIG. 4

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SANITARY NAPKIN

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Continuation-in-part of application Ser. No. 548,818, May 2, 1966. This application Dec. 26, 1968, Ser. No. 787,057

Int. Cl. A61f *13/16*

U.S. Cl. 128—290 4 Claims

ABSTRACT OF THE DISCLOSURE

A sanitary napkin having adhesive tab ends for securing the napkin to an undergarment of a wearer so that the napkin is comfortable for the wearer and does not damage the undergarment, and the napkin is thereby secured in position. A liquid repellant layer in the napkin is disposed between a pad and a body contact layer to prevent liquid from reaching the undergarment. The laminations of the napkin constitute an integral unit with the tabs for readily adhesively securing the napkin to an undergarment in a desired body position for the comfort of the wearer. The layers that extend out to form the tab ends are also folded back to form an overlapping terminal end.

The present invention relates in general to sanitary napkins, and more particularly to a sanitary napkin detachably secured to a wearer's undergarment.

This application is a continuation-in-part of my copending application Ser. No. 548,818, now U.S. Patent No. 3,454,008 filed on May 2, 1966, for Sanitary Napkin.

An object of the present invention is to provide a sanitary napkin that can be worn without the employment of sanitary belts or similar devices.

Another object of the present invention is to provide a sanitary napkin which is less conspicious when worn.

Another object of the present invention is to provide a sanitary napkin which is more moisture proof.

Another object of the present invention is to provide a sanitary napkin that is more comfortable to the wearer.

Another object of the present invention is to provide a sanitary napkin in which the force applied to the body for securing the napkin in place has more uniform distribution.

Other and further objects and advantages of the present invention will be apparent to one skilled in the art from the following description taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a plan view of the sanitary napkin embodying the present invention.

FIG. 2 is a vertical sectional view of the sanitary napkin taken along lines **2**—**2** of FIG. 1.

FIG. 3 is a fragmentary exploded view of the sanitary napkin.

FIG. 4 is a vertical sectional view of the sanitary napkin taken along line **4**—**4** of FIG. 1.

Illustrated in FIGS. 1–4 is the sanitary napkin **10** of the present invention which is caused to adhere to an inner surface of a panty or other suitable undergarment and is adapted to contact the body of a woman surrounding the vaginal area to absorb the discharge of the menses during menstrual period.

The sanitary napkin **10** of the present invention comprises a pad **11** of highly absorbent material, such as cotton gauze and tissue. As shown in FIGS. 2 and 3, the sanitary napkin **10** is of laminated construction and comprises an outer sheet **13** of relatively thin, absorbing, soft, flexible material, such as cotton gauze. The sheet **13** extends beyond the pad **11** at each end thereof to form a tab section **13***a* and a tab section **13***b* and

then continues to provide a complete enclosure for the sanitary napkin **10**. The tab section **13***b* is slightly longer than the tab section **13***a*. The absorbent gauze is sufficiently soft so as to be comfortable to the wearer and not irritate the skin, and yet it is sufficiently strong so as not to wear away with contact. It is the sheet **13** of absorbent gauze that contacts the body of the woman using the sanitary napkin **10** and is disposed on the body contact side of the pad **11**, and that portion thereof may be referred to as the body contact layer **13***c*. The sheet **13** also extends beyond each side of the pad **11** a distance greater than the depth of the pad **11**. In addition thereto, the sheet **13** extends along the garment contact side of the sanitary napkin **10** and that portion thereof may be referred to as the undergarment contact layer **13***d*.

On the opposite side of the pad **11** or on the garment side of the pad **11** is disposed a layer **15** of suitable absorbent material, such as tissue paper, which serves as a filler layer for the laminated construction of the sanitary napkin **10**. The filler layer **15**, which is disposed inwardly of the sheet **13**, extends beyond each end of the pad **11** and is disposed adjacent to the pad **11**. The filler absorbent layer **15**, which terminates along the side edges of the pad **11**, comprises an absorbent, flexible, relatively thin tissue material. The tissue filler absorbent material **15** is very durable and yet highly absorbent.

Juxtaposed between the filler absorbent layer **15** and the undergarment layer **13***d* is a liquid repellent or moisture proof sheet **16** of vinyl or polyethylene material that retains the liquid or menses discharge within the sanitary napkin **10** and prevents the same from soiling the undergarments of the wearer of the sanitary napkin **10**. The moisture repellant sheet **16** is sufficiently large to extend the full length of the filler layer **15** and terminates in the vicinity of the ends of the pad **11** (FIG. 2). The sheet **16** is disposed between the layer **15** and the undergarment contact layer **13***d* in the form of double layers, encompassing the tab ends of the layer **15**. In addition thereto, the sheet **16** is fused directly to the undergarment contact layer **13***d* of the sheet **13** and the layer **15**.

Contiguous with the liquid repellant sheet **16** is the undergarment contact layer **13***d* of the sheet **13**. At the ends of the undergarment contact layer **13***d*, the sheet **13** includes a tab section **13***e* and a tab section **13***f* similar to the tab sections **13***a* and **13***b*, respectively, of the body contact layer **13***c*.

Each end of the sanitary napkin **10** includes a tab, such as tabs **25** and **26**. The tabs **25** and **26** have their edges directed toward the longitudinal centerline of the sanitary napkin **10** (FIG. 1), each end of which is cut straight and slightly tapered. The tab **26** is slightly longer than the tab **25**.

Thus, when the sanitary napkin **10** is worn, the tab **25** extends forwardly of the body of the user and the tab **26** extends rearwardly of the body of the user. The tabs **25** and **26** are relatively thin and flexible, and yet strong, and are formed by fusing together the confronting tab end sections. More specifically, the tab **25** is formed by heat pressure fusing or bonding of the tab ends **13***a* and **13***e* of the sheet **13** with the double layer tab ends of the sheet **16** and the tab end of the layer **15**. The tab ends of the sheet **16** are between the tab end **13***a* and the tab end of layer **15**. The tab **26** is formed by heat pressure fusing or bonding of the tab ends **13***b* and **13***f* of the sheet **13** with the double layer tab ends or the sheet **16** and the tab end of the layer **15**. The tab ends of the sheet **16** are between the tab end **13***b* and the tab end of the layer **15**.

It is to be observed that the moisture repellant layer **16** extends out to form the tab ends and also is folded to double back so as to overlap the terminal ends of the filler layer **15**. Thus, there is a gradual tapering from the bulk portion of the napkin, which provides a gradual transition

from the bulk of the napkin tapering to the thinner laminated tab ends of the napkin to which adhesive is applied. Strips **30** of adhesive material, which have a non-adhesive backing thereon, are secured to the layer **13***d* of the sheet **13** along the entire edges of the tabs **25** and **26** (FIG. 1). When the non-adhesive paper backing is removed from the adhesive strips **30**, the adhesive strips **30** are caused to adhere to the inner surface of the panty or other suitable undergarment so as to enable the absorbent layer **13***c* of the sheet **13** to contact the body of the woman wearing the panty to surround the vaginal area of the user thereof. The adhesive employed does not tear the undergarment.

In the use of the sanitary napkin **10** of the present invention, the adhesive strips **30** have the non-adhesive paper backing thereon removed to expose the adhesive surface thereof. Thereupon the sanitary napkin **10** is attached to the inner surface of the panty or other suitable undergarment by causing the adhesive strips **30** to adhere to the panty. The sanitary napkin **10** is placed on the panty so that the absorbent layer **13***c* contacts the body of the woman wearing the panty so as to surround the vaginal area of the user thereof. In so doing, the tab **25** extends forwardly of the body of the user and the tab **26** extends rearwardly of the body of the user.

It is to be understood that modifications and variations of the embodiment of the invention disclosed herein may be resorted to without departing from the spirit of the invention.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent is:

1. A sanitary napkin comprising a pad, a body contact layer of absorbent material disposed on one side of said pad, a garment contact layer disposed on another side of said pad, a layer of liquid repellant material disposed between said pad and said garment contact layer, said garment contact layer being arranged to extend beyond the ends of said pad, said liquid repellant layer being arranged to extend beyond the ends of said pad and folded back for projecting toward the central portion of said pad, and adhesive means on that portion of said garment contact layer extending beyond said pad for causing said sanitary napkin to adhere to a garment.

2. A sanitary napkin as claimed in claim **1** wherein said layers are secured to said liquid repellant layer at the portions thereof extending beyond said pad.

3. A sanitary napkin as claimed in claim **1** wherein said layers are secured to a filler layer disposed between said pad and said body contact layer at the portions thereof extending beyond said pad.

4. A sanitary napkin as claimed in claim **2** wherein said layers are secured to a filler layer disposed between said pad and said body contact layer at the portions thereof extending beyond said pad.

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