

SPECIFICATION

Sanitary towel

5 The present invention relates to sanitary towel for menstrual discharges. More particularly, the present invention relates to a sanitary towel in which the adhesion of a portion to remain in contact with the human skin is improved so that the leakage of
10 discharged fluids in the lateral direction is reduced or prevented.

A conventional sanitary towel has a structure comprising an absorbent member composed of fluffed pulp and absorbent tissue,
15 leakage-preventing layers formed on the lower and side faces of the absorbent member and a non-woven fabric enclosing the entire assembly. The non-woven fabric of this sanitary towel is thin and has a flat structure, and it is rendered hydrophobic
20 by incorporation of a binder or hydrophobic fibers. Since the sanitary towel is inserted in the crotch while it is used, it has a humped shape in which the central portion is higher than the edge portions. Accordingly, when the speed of discharge of the
25 fluid is very high, the discharged fluid can flow in a lateral direction along the surface of the towel by virtue of the smoothness and hydrophobic property of the non-woven fabric, and lateral leakage results. If the width of the sanitary towel is reduced so that a
30 humped shape is not formed, the volume of the absorbent member is decreased and the leakage-preventing layer becomes rolled up. Accordingly, there is a danger of insufficient adsorption and leakage of discharged fluid. As improved sanitary towels for preventing such leakages, Japanese Patent Publication No. 39960/76 and Japanese Utility Model Publication No. 15116/77 propose novel structures. However, even in these cases the adhesion of the skin to the contact portion is insufficient, and no
40 satisfactory prevention of leakage has been attained.

We have carried out research with a view to eliminating or reducing the above-mentioned defect of conventional sanitary towels, without reducing the absorbing properties, and as a result, we have
45 now completed the present invention.

Accordingly, we provide a sanitary towel having a substantially rectangular shape, which comprises a non-woven fabric sheet forming a liquid-permeable surface, a leakage-preventing layer comprising a
50 liquid-impermeable back sheet, and an absorbent member between the non-woven fabric sheet and the leakage-preventing layer, wherein a concave area is formed over a part of the central portion of the longer sides of the absorbing member, and the
55 non-woven fabric sheet and the leakage-preventing layer are bonded together to form flaps on the outside of the longer sides of the absorbing member, and wherein the minimum width of the absorbing member at the concave area is 50 to 90% of the
60 maximum width of the absorbing member, and the length of the concave area is 20 to 90% of the entire length of the member.

According to the invention, the absorbent member is encased in the non-woven sheet and a

65 leakage-preventing sheet in such a manner that their

peripheral portions form together a flap. The absorbent member has concave portions on its longitudinal sides.

In the sanitary towel according to the present
70 invention, as the leakage-preventing layer, there can be used, for example, a polyethylene film, a polyvinyl alcohol film, a polyethylene-laminated paper and a waterproof paper which has been subjected to a treatment to render it water-repellent. There can,
75 for example, be used an absorbent member of a conventional material such as a fluffed pulp, absorbent tissue or polymeric absorbent. A layer of rayon staple fibres or synthetic fibers may be inserted between the absorbent member and the non-woven
80 fabric as a surface sheet.

Sanitary towels embodying the invention are described below and by way of example only, with reference to the accompanying drawings, in which:

Fig. 1 is a perspective view illustrating one
85 embodiment of the sanitary towel according to the present invention. Fig 2 is a view showing a section taken along the line X_1-X_1' in Fig. 1. Fig. 3 is a view showing a section taken along the line X_2-X_2' in Fig. 1. Figs 4A to 4E are plan views showing varieties of absorbent member. Figs 5A to 5C are plan views
90 showing various alternative pleated portions of the sanitary towel of the present invention.

As may be seen from Figs. 1 to 3 the sanitary towel of the present invention is formed by wrapping an
95 absorbing member 2 having notched concave areas 5 in its central portion in a non-woven fabric sheet 1 and overlapping a leakage-preventing layer 3 and the non-woven fabric sheet 1 to form flaps 4. The shape of the concave area 5 is not limited to those shown by way of example in Figs. 4A to 4E. The minimum value of the width a of the absorbent member, which is in the concave area 5, is 50 to 90% of b which is the maximum width as shown in Figs. 2 to 4. Furthermore, the length of the concave area c is
100 20 to 90% of the whole length d of the longer side of the absorbing member 2. Figs. 5A to 5C are plan views showing various variations of the flap portion 4. The shape of the flap portion 4 is not particularly critical in the present device, and a concave area
105 may also be formed on the flap portion 4 as shown in Figs. 5B and 5C.

In the sanitary towel of the present device having the above-mentioned structure, the adhesion to the contact portion is highly improved, and lateral
115 leakage of discharged fluid can be effectively prevented.

CLAIMS

1. A sanitary towel having a substantially rectangular shape, which comprises a non-woven fabric sheet forming a liquid-permeable surface, a
120 leakage-preventing layer comprising a liquid-impermeable back sheet, and an absorbent member between the non-woven fabric sheet and the leakage-preventing layer, wherein a concave area is formed over a part of the central portion of the longer sides of the absorbing member, and the non-woven fabric sheet and the leakage-preventing layer are bonded together to form flaps on the outside of the longer sides of the absorbing member, and wherein the minimum width of the absorb-
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- According to the invention, the absorbent member is encased in the non-woven sheet and a leakage-preventing sheet in such a manner that their

peripheral portions form together a flap. The absorbent member has concave portions on its longitudinal sides.

- In the sanitary towel according to the present invention, as the leakage-preventing layer, there can be used, for example, a polyethylene film, a polyvinyl alcohol film, a polyethylene-laminated paper and a waterproof paper which has been subjected to a treatment to render it water-repellent. There can, for example, be used an absorbent member of a conventional material such as a fluffed pulp, absorbent tissue or polymeric absorbent. A layer of rayon staple fibres or synthetic fibers may be inserted between the absorbent member and the non-woven fabric as a surface sheet.

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CLAIMS

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ing member at the concave area is 50 to 90% of the maximum width of the absorbing member, and the length of the concave area is 20 to 90% of the entire length of the member.

5 2. A sanitary towel as set forth in Claim 1 wherein the flaps have concave areas corresponding with the concave areas of the absorbent member.

3. A sanitary towel, substantially as herein described, with reference to the accompanying drawings.
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