

Publication in the Official Journal *Yes* / No

File Number: T 697/89 - 3.2.2
Application No.: 83 850 068.4
Publication No.: 0 091 412
Title of invention: Absorbent product

Classification: A61F 13/18, A41B 13/02

D E C I S I O N
of 12 August 1991

Proprietor of the patent: Mölnlycke AB
Opponent: Kimberly-Clark Corporation

Headword:

EPC Article 56

Keyword: "Inventive step (yes)"
"Non-obvious transfer of only some of the features required
to solve the same problem in the prior art"

Headnote



Case Number : T 697/89 - 3.2.2

D E C I S I O N
of the Technical Board of Appeal 3.2.2
of 12 August 1991

Appellant :
(Proprietor of the patent)

Mölnlycke AB
S-405 03 Göteborg (SE)

Representative :

Alfredson, Stig
H. Albihns Patentbyrå AB
Box 7664
S-103 94 Stockholm (SE)

Respondent :
(Opponent)

Kimberly-Clark Corporation
401 North Lake Street
Neenah, Wisconsin 54956-0349 (US)

Representative :

Patentanwälte
Grünecker, Kinkeldey, Stockmair & Partner
Maximilianstraße 58
D-8000 München 22 (DE)

Decision under appeal :

Decision of the Opposition Division of the
European Patent Office dated 7 September 1989
revoking European patent No. 0 091 412 pursuant
to Article 102(1) EPC.

Composition of the Board :

Chairman : G. Szabo
Members : P. Dropmann
F. Benussi

Summary of Facts and Submissions

- I. European patent No. 0 091 412 claiming priority date of 1 April 1982 was granted on 6 May 1987 on the basis of European patent application No. 83 850 068.4 filed on 17 March 1983.
- II. An opposition was filed against this patent on the grounds of lack of novelty and inventive step (Article 100(a) EPC) and inadmissible extension of subject-matter (Article 100(c) EPC).

The following state of the art documents were introduced into the opposition proceedings:

- (1) US-A-3 860 003,
- (2) US-A-4 259 958,
- (3) AU-A-68 723/81 and
- (4) DE-A-2 854 792.

- III. In a decision dated 7 September 1989, the Opposition Division revoked the patent on the basis of the amended Claims 1 to 3 which had been filed with a letter dated 12 July 1989 and were limited to a sanitary napkin. According to the decision, the subject-matter of Claim 1 was novel and did not extend beyond the content of the application as originally filed, but did not involve an inventive step in the light of document (3), since the solution to the problem underlying the invention was already known from this document.
- IV. The Appellant (Proprietor of the patent) filed a Notice of Appeal against this decision on 1 November 1989. The appeal fee was paid on the same date. The Statement of Grounds was received on 21 December 1989. It was accompanied by a set of alternative claims.

V. The opposition was withdrawn by letter of 6 November 1990.

VI. The main request of the Appellant was that the decision under appeal be set aside and the patent be maintained with the following documents which also formed the basis for the revocation:

amended description filed on 12 July 1989,
amended Claims 1 to 3 filed on 12 July 1989, and
drawings as granted.

The subsidiary request was that the patent be maintained on the basis of the set of alternative Claims 1 to 3 filed with the Statement of Grounds.

VII. Claim 1 according to the main request reads as follows:

"Sanitary napkin, comprising an absorbent body (3) and a jacket enclosing said body, said jacket comprising a fluid-permeable layer (2) for being located close to the user's skin when in use, and a fluid-impermeable layer (1) disposed on the opposed side, the back, of the absorbent body, at least the fluid-impermeable outer layer (1) extending outside the two longitudinal lateral edges of the absorbent body (3) so as to form two side margins (4,5) each including an elastic means (6,7) in the form of elastic strings or the like which are disposed substantially in the longitudinal direction of the napkin, each of said elastic means (6,7) extending at least in the central portion of the napkin and being secured to the respective side margins in a pre-stretched condition, wherein the elastic means (6,7) are disposed closer to the external edges of said margins than to the external edges

of the absorbent body, so as to cause the side margins to be raised against the border of the absorbent body in the direction towards the fluid-permeable layer and so as to cause at least the midportion of the side margins (4,5) to be contracted and held by the elastic means in their raised positions, whereby the side margins serve as barriers against lateral leakage of fluid."

Claim 1 according to the subsidiary request essentially differs from Claim 1 of the main request only in that the following feature is incorporated after the word "wherein":

"the side margins (4,5) at least centrally of the napkin extend beyond the absorbent body by a distance of about 1 to 1,5 times greater than the thickness of said body and".

Dependent Claims 2 and 3 relate to preferred embodiments of the sanitary napkin according to Claim 1. They are identical for both requests.

Reasons for the Decision

1. The appeal is admissible.
2. The Board shares the opinion of the Opposition Division that Claim 1 of the main request does not offend against Article 123(2) EPC. Indeed, all of its features and their interrelationships are disclosed either in Claim 1 as originally filed or in Figures 2 and 4. In addition, the requirement of Article 123(3) EPC is met, since the amendments restrict the scope of the claim.

3. Novelty

The subject-matter of Claim 1 according to the main request is novel over the prior art documents (1) to (4) and the documents cited in the search report. None of the documents discloses a sanitary napkin comprising elastic means in the form of elastic strings or the like which are disposed as specified in Claim 1. Most of the documents are concerned with diapers which are not suitable for being used as sanitary napkins without modification. It is true that document (4) mentions sanitary napkins (cf. page 4, last line of the second paragraph), but the particular way of arranging elastic means is only disclosed in conjunction with a diaper (cf. Figure 1).

4. Closest state of the art

The state of the art which is closest to the subject-matter of Claim 1 of the main request is, in the view of the Board, described on page 1, lines 3 to 8, page 2, last paragraph and page 3, first paragraph of the application as originally filed (cf. also column 2, lines 20 to 28 of the present specification). According to this description, sanitary napkins have been known which comprise an absorbent body and a jacket enclosing said body, said jacket comprising a fluid-permeable layer located closest to the user when in use and a fluid-impermeable layer disposed on the opposite side, the back, of the absorbent body. The fluid-impermeable back layer may be extended laterally and folded towards the side edges of the napkin.

It is to be noted that document US-A-4 333 782 mentioned in the specification and published on 8 June 1982 does not represent a state of the art within the meaning of Article 54 EPC since it was published after the valid priority date of the patent in suit.

5. Problem and solution

Extending the fluid-impermeable back layer laterally and folding it up about the sides of the napkin as mentioned in the preceding paragraph have the advantage that liquid from the interior of the absorbent body is prevented from leaking out laterally. However, liquid can still run out over the side in contact with the user during use, on the front side (cf. the wording of the specification, column 2, lines 25 ff.) and thus on the outside of the fluid-impermeable layer, which is folded up (cf. column 2, lines 20 to 28 of the present specification).

Thus, the objective technical problem to be solved is, in agreement with the Appellant's own submission on page 2, first paragraph of the Statement of Grounds, to be seen as being to prevent leakage of fluid that has not had time to be absorbed, in particular leakage out to the sides and over the longitudinal edges of the napkin.

This problem is solved in accordance with Claim 1 of the main request by providing and securing an elastic means in the form of elastic strings or the like in a pre-stretched condition in the longitudinal direction of the napkin in each of two side margins formed by extending at least the fluid-impermeable outer layer outside the two longitudinal lateral edges of the absorbent body. The elastic means are disposed closer to the external edges of the side margins than to the external edges of the absorbent body, so as to cause the side margins to be raised against the border of the absorbent body in the direction towards the fluid-permeable layer. In addition at least the midportions of the side margins are thereby contracted and held by the elastic means in their raised positions, whereby the side

margins serve as barriers against lateral leakage of fluid.

6. Inventive step

6.1 When considering whether the prior art revealed during the proceedings gives any indication as to whether the above-mentioned problem can be solved in the way set out in the preceding paragraph, it is to be borne in mind that none of the documents cited in the search report and in the examination and opposition stage discloses a sanitary napkin comprising elastic means in the form of elastic strings or the like which are secured to the napkin in its longitudinal direction in a pre-stretched condition. The elastic means of the sanitary napkin known from document AT-B-292 917 cited in the search report is stretched in the transverse direction by using a foil.

6.2 Elastic means of the form mentioned above and secured in a pre-stretched condition are, however, known in connection with diapers (cf. documents (1) to (4)). Thus, the question arises whether or not the skilled person would consider this state of the art when trying to solve the problem in sanitary napkins as set out in paragraph 5 above.

The purpose of the elastic means in the known diapers is either to provide increasing amounts of absorptive material in the crotch area of the diaper (cf. document (3), column 1, lines 35 to 48 and Figures 11 to 13) or to provide diapers with elastically contractible leg openings in order to improve the fit and seal around the user's thighs and thus to avoid leakage (cf. documents (1) to (4)). Such elastic legged portions of the diaper encircle the user's thighs and are tensioned when the article is in use.

Whilst diapers of the kind cited in these documents are like undergarments which seal off a substantial part of the user's body, sanitary napkins are completely different in function and size since they only cover the vaginal opening and the area in the immediate vicinity thereof without a hermedical seal being thereby provided. In particular, portions of the napkin cannot encircle the thighs in a tensioned manner which would be necessary to achieve the sealing effect described in said documents. Thus, it could not be expected to make sense to transfer the tensionable sealing arrangement of the prior art, i.e. the particular elastic means disclosed in documents (1) to (4), to sanitary napkins. In view of this, it cannot be considered as immediately obvious to apply such elastic means to sanitary napkins when faced with the problem of preventing leakage and to utilise such means to raise the side flaps to develop in a sanitary napkin the liquid barrier specified in Claim 1, instead of providing a tight seal between the outer edge and the skin.

Insofar the Board concurs with the view of the Opposition Division set forth in the first two sentences of paragraph 5 of the communication dated 16 March 1989.

- 6.3 In the Decision under appeal the Opposition Division was nevertheless of the opinion that the claimed solution to the problem was already known in the prior art. It was stated in the Decision that document (3) disclosed a diaper having side margins formed by flexing regions. The peripheries of these regions (should read "margins") were provided with elastic means. The effect of these elastic means was to raise the side margins to form pockets which improve waste retention. Thus the solution to the problem as proposed in the prior art was the same as that proposed in the invention. The subject-matter of Claim 1 did not therefore involve an inventive step.

6.4 The Board cannot share this opinion. It is true that document (3) can be considered as dealing with the problem of preventing leakage out of the sides of diapers. However, the solution to this problem as proposed in document (3) is not restricted to the provision of side margins formed by flexing regions and of elastic means included therein which may have the effect of raising the side margins (cf. Figures 2 and 14A to C) to form pockets for waste retention. It is rather essential for the solution to the stated problem that, associated with diapers, absorbent material is also present between the elastic means and the flexing regions, i.e. in the side margins, and that the diaper has a sufficiently stiff lower profile crotch section and planar side margins to preserve the configuration of the diaper and the containment pocket (cf. document (3), in particular Claim 1).

6.5 The Board takes the view that it is not necessarily obvious to a skilled person faced with a certain problem in a particular field to use only some of the essential features which have solved the same problem in an adjacent field if the omission of none of the remaining features appears to be desirable.

The transfer of all of the features would not have led to the subject-matter of Claim 1, since the side margins of the claimed napkin must be free from absorbent material which is not the case in the diaper known from document (3). The presence of absorbent material in the side margins of the sanitary napkin is excluded by the feature of Claim 1 that at least the fluid-impermeable outer layer extends outside the two longitudinal lateral edges of the absorbent body so as to form two absorbent free side

margins. This presumably contributes to the prevention of leakage by avoiding blood creeping in the absorbent layer, e.g. by capillary action or the like, up to the free outer edge of the napkin where this could be passed to the skin rubbing itself against the edge. Thus the feature contributes to the solution of the problem in a manner which would not be relevant to the closed, i.e. sealed conditions of the cited art. Whilst this and similar prior art tried to maximise the amount of absorbent material, the present invention deliberately and unexpectedly suggests the opposite.

The fact that Figure 5 of document (1) discloses diapers having side flaps which are free from absorbent material would not have rendered obvious the omission of such material in the side flaps of sanitary napkins since, according to this document, the purpose of such a side flap is to improve its gathering by elastic means thereby providing an elasticized contractible line through the side flaps.

- 6.6 Summing up, the Board comes to the conclusion that the subject-matter of the present Claim 1 according to the main request cannot be derived in an obvious manner from the cited prior art and, accordingly, involves an inventive step having regard to Article 56 EPC.

- 7. The napkin according to Claim 1 of the main request is, therefore, patentable (Article 52(1) EPC) and the patent may be maintained on the basis of this Claim 1 and dependent Claims 2 and 3.

- 8. Since the main request has been allowed, it is not necessary to consider the subsidiary request.

Order

For these reasons, it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to maintain the patent on the basis of the documents according to the main request as specified in paragraph VI above.

The Registrar:



S. Fabiani

The Chairman:



G. Szabo