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D E C I S I O N
of 24 October 2002

Case Number: T 0770/99 - 3.2.6

Application Number: 92924210.5

Publication Number: 0613360

IPC: A61F 13/15

Language of the proceedings: EN

Title of invention:

Method of making a disposable training pant having fusion-slit side seams and disposable training pant produced therefrom

Patentee:

THE PROCTER & GAMBLE COMPANY

Opponent:

Kimberly-Clark Corporation

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56

Keyword:

"Novelty (yes)"
"Inventive step (yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 0770/99 - 3.2.6

D E C I S I O N
of the Technical Board of Appeal 3.2.6
of 24 October 2002

Appellant: Kimberly-Clark Corporation
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Decision under appeal: Interlocutory decision of the Opposition Division
of the European Patent Office posted 20 May 1999
concerning maintenance of European patent
No. 0 613 360 in amended form.

Composition of the Board:

Chairman: P. Alting van Geusau
Members: H. Meinders
M.-B. Tardo-Dino

Summary of Facts and Submissions

- I. The appeal is from the interlocutory decision of the Opposition Division announced on 23 March 1999 and posted on 20 May 1999 maintaining European Patent No. 0 613 360 in amended form.
- II. In its decision the Opposition Division considered that the subject-matter of claims 1 and 6 of the main request filed at the oral proceedings held on 23 March 1999 met the requirements of the EPC.

The following documents from the opposition proceedings are relevant for the present appeal proceedings:

D2: "An automated manufacturing process for non-woven garments", Proceedings Nonwovens Conference 1988

D9: US-A-4 610 681.

- III. Against this decision an appeal was filed by the opponent by fax on 29 July 1999, with payment of the appeal fee on that day. The statement of grounds of appeal followed by fax dated 30 September 1999.
- IV. In preparation of oral proceedings the Board, pursuant to Article 11(2) of the Rules of Procedure of the Boards of Appeal, sent a communication to the parties setting out its preliminary opinion on the case. In response the patentee-respondent deleted claim 6 of the set of claims upheld by the Opposition Division.
- V. Oral proceedings were held on 24 October 2002. The opponent-appellant requested setting aside the decision of the Opposition Division and revocation of the

patent.

The patentee-respondent requested setting aside the decision under appeal and maintenance of the patent in amended form based on claims 1 to 3 and pages 2 to 15 of the description as filed in the oral proceedings before the Board and Figures 1 to 11 as granted.

Claim 1 of this request reads as follows:

"A method of making a disposable garment which is a training pant or incontinence garment and which has separable seams, the method comprising the steps of:

- (a) providing a chassis (14) comprising a front portion (56) having longitudinal side regions (88) made of polymeric material, elasticated side panels (71), and an elasticated waistband (34), a rear portion (58) opposed to said front portion, having longitudinal side regions (88), made of a polymeric material having a similar melting point as said polymeric material of said longitudinal side regions of said front portion, elasticated side panels (72); and an elasticated waistband (34), and a crotch portion (57) between said front portion (56) and said rear portion (59);
- (b) superposing said longitudinal side regions (88) of said front portion with said longitudinal side regions of said rear portion to form a first seaming area (40) and a second seaming area (40); characterised in
- (c) simultaneously sealing and cutting a portion of said first seaming area by inputting ultrasonic

energy to said first seaming area sufficient to cause the polymeric material of said first seaming area to flow and thin away to sever the polymeric material in a first area (658) while simultaneously bonding the polymeric material in a marginal area (660) adjacent said first area to form a first flangeless seam which is a mass of fused polymeric material, which extends from the disposable garment 0.79 mm (1/32 of an inch) or less and forms a first leg-opening; and

- (d) simultaneously sealing and cutting a portion of said second seaming area by inputting ultrasonic energy to said second seaming area sufficient to cause the polymeric material of said second seaming area to flow and thin away to sever the polymeric material in a first area (658) while simultaneously bonding the polymeric material in a marginal area (660) adjacent said first area to form a second flangeless seam which is a mass of fused polymeric material which extends from the disposable garment 0.79 mm (1/32 of an inch) or less and forms a second leg-opening, and a waist-opening substantially encircled by said front waistband and said rear waistband, said second leg opening being separated from said first leg opening by said crotch portion."

VI. The arguments of the opponent-appellant can be summarised as follows:

Novelty was not at stake, only inventive step in respect of the combination of the teachings of D9 and D2. D9 was considered to constitute the closest prior art, from which the method of claim 1

distinguished itself by the provision of:

- elasticated side panels
- inputting ultrasonic energy to the seaming areas such that the seams are a mass of fused polymeric material which extends from the disposable garment 0.79 mm or less.

The first feature had nothing to do with the second feature and was well known in the prior art.

The method according to D9 provided a seam with a plurality of sealing lines, resulting in a seam which the skilled person immediately recognised as being in need of improvement as regards the required discreetness of the garment. D2 relating to the same technical field provided the skilled person with the information that with a single sealing line, at the same time resulting in severing off the remainder of the seaming material, a more discreet and nevertheless strong seam could be achieved. The measure of the seam width of 0.79 mm was a mere desideratum, and would be achieved anyway by the single pass sealing and severing method of D2.

VII. The patentee-respondent submitted the following counter-arguments:

There was no incentive for the skilled person to do away with the plurality of seaming lines as taught by D9, because these were already found to be sufficiently discreet as well as necessary for achieving the required strength of the seam of the training pant, which was a product different from those

described in D2. D9 also provided a counter-indication to severing off the remainder of the seam material, because it specifically preferred the wider seam with the plurality of seaming lines. D2 was not concerned with the width of the seam as the garments were turned inside out, nor with the way the garments looked.

Reasons for the Decision

1. The appeal is admissible.

2. *Amendments (Article 123 EPC)*

Claim 1 as maintained in amended form by the Opposition Division did not raise objections pursuant to Article 123 EPC from the opponent nor the Opposition Division. The Board sees no reason to be of a different opinion.

Present claim 1 has been further amended in that the longitudinal side regions are now "made of polymeric material" instead of "comprise a polymeric material", that the sealing and cutting of the seam is now done specifically by ultrasonic energy only and that the flangeless seams are a mass of fused polymeric material instead of "comprise a mass of fused polymeric material".

These amendments can be unambiguously derived from the original application documents, page 8, last paragraph, page 37, second paragraph; page 34, last paragraph to page 36, last paragraph; page 34, second paragraph. They further limit the subject-matter of claim 1 as granted, thus the requirements of Article 123(2)

and (3) EPC are met.

The amendments to the description are necessary to bring it into line with claim 1 as amended and are also not objectionable pursuant to Article 123 EPC.

3. *Novelty (Article 54 EPC)*

Novelty of the subject-matter of claim 1 has not been an issue in the opposition - or the appeal proceedings.

4. *Inventive step (Article 56 EPC)*

4.1 The parties agree that D9 constitutes the closest prior art for discussing inventive step of the subject-matter of claim 1. The Board has no reason to see this differently: D9 is in particular concerned with the question of discreetness and strength of the side seams of training pants, as also is the case for the patent in suit.

According to the method of making a disposable garment as disclosed in D9 the seams in the longitudinal side regions of the garment involve a **plurality** of parallel sealing lines. This is done to provide a discreet, strong, easy to form non-leaking side seam (column 2, lines 33 to 35 and column 6, lines 25 to 35).

The disposable garment resulting from this method has a side seam with a width of between about 1/16 and 3/16 of an inch.

4.2 When starting from the method disclosed in D9 as closest prior art the main object of the invention in the patent in suit is to provide a less irritating and

even more discreet seam while maintaining the strength as well as the separability of the seam (see patent, page 3, lines 22 to 27).

The subject-matter of claim 1 differs from the method disclosed in D9 by its characterising features, being: simultaneously sealing and cutting the polymeric material of the seaming areas such that this material flows and thins away so as to sever off the material in a first area while at the same time the polymeric material in a marginal area immediately adjacent the first area is bonded to form a seam which is a mass of fused polymeric material which extends from the disposable garment 0.79 mm or less.

This provides for a seam which is less conspicuous and less irritating than the one resulting from the method disclosed in D9.

In view of the discussion below, there is no need to discuss the other feature (elasticated side panels) distinguishing the subject-matter of claim 1 from the method in D9.

- 4.3 In the method as disclosed in D2 the ultrasonic seamer bonds together the two fabric portions of the product and in doing so simultaneously cuts off the remaining fabric. The method produces "guaranteed seams that will not come undone". The products are among others described as undergarments, health care products and surgical gowns

According to the appellant-opponent it was evident from the intended use of these products as well as the method in which seaming and cutting were performed at

the same time as disclosed in D2 that the seams thus produced also had the small width as claimed, so as to provide the discreteness such garments implied. The skilled person would recognise that D2 provided the solution for solving the problem of the wide seam resulting from method disclosed in D9.

- 4.4 It is the board's established case law in assessing inventive step that the question is not whether the skilled person **could** have carried out the invention, but whether he **would** have done so in the hope of solving the underlying technical problem (see Case Law of the Boards of Appeal, fourth edition 2001, Chapter I.D.6.1).

In view of the indications in D9 that in a training pant at least two sealing lines are necessary to achieve a strong non-leaking seam which at the same time is discreet, the Board considers that the skilled person would not have contemplated reducing the number of sealing lines to one (such as suggested in D2) because that goes against the teaching of D9. Even though it is said that the seams do not become undone, there is no indication to be found in D2 that the single sealing line used for the seam of the disposable garment is strong enough for practical use as side seam in training pants, in which the forces occurring during use are such that a heavier strain is imposed on the seam as opposed to the garments discussed in D2. Furthermore, the Board considers that this reference to the seams becoming undone is related to what happens during production and handling of the garments rather than what happens to the garment when put under strain.

- 4.5 Furthermore, it is also not derivable from D2 that the

single seam thus produced extends at the most 0.79 mm from the garment. In fact no indications are given in D2 about the actual width of the seam. It was only by reference to the intended use as garments and the fact that seaming and cutting was done in one traverse that the appellant-opponent deduced that the seam width would fall in the range claimed. However, there is no basis to be found in D2 for that interpretation, in particular since it is not clear whether the garments are worn as produced (with the seams on the outside) or turned inside out. Further, for the intended use as disposable garments like surgical gowns, clean room apparel, protective clothing, etc. it is not derivable from D2 that it is indispensable that the seams should have the small width as claimed.

- 4.6 Thus the Board concludes that the subject-matter of claim 1 does not follow in an obvious manner from the relevant prior art and therefore involves inventive step (Article 56 EPC).

The subject-matter of dependent claims 2 and 3 is for preferred ways of carrying out the method of claim 1 (Rule 29(3) EPC), thus also fulfils the requirements as to novelty and inventive step.

The patent can thus be maintained in the amended form as requested by the patentee-respondent (Article 102(3) EPC).

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 with the following documents:

claims 1 to 3 and description pages 2 to 15 as filed during the oral proceedings before the Board and Figures 1 to 11 as granted.

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau