

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 4 December 2018**

Case Number: T 1677/14 - 3.2.06

Application Number: 02808255.0

Publication Number: 1602348

IPC: A61F13/49

Language of the proceedings: EN

Title of invention:

METHOD FOR PRODUCING DISPOSABLE WEARING ARTICLE

Patent Proprietor:

Zuiko Corporation

Opponent:

Kimberly-Clark Worldwide, Inc.

Headword:

Relevant legal provisions:

EPC 1973 Art. 56
EPC Art. 123(2)

Keyword:

Inventive step - main request (no), auxiliary requests 1 to 5
(no)

Added subject-matter - auxiliary requests 6 to 7 (yes)

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 1677/14 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 4 December 2018

Appellant: Kimberly-Clark Worldwide, Inc.
(Opponent) 401 North Lake Street
Neenah, Wisconsin 54956 (US)

Representative: Dehns
St. Brides House
10 Salisbury Square
London EC4Y 8JD (GB)

Respondent: Zuiko Corporation
(Patent Proprietor) 15-21, Minamibefucho,
Settsu-Shi
Osaka 566-0045 (JP)

Representative: Daniels, Jeffrey Nicholas
Page White & Farrer
Bedford House
John Street
London WC1N 2BF (GB)

Decision under appeal: **Interlocutory decision of the Opposition**
Division of the European Patent Office posted on
17 June 2014 concerning maintenance of the
European Patent No. 1602348 in amended form.

Composition of the Board:

Chairman M. Harrison
Members: M. Hannam
J. Hoppe

Summary of Facts and Submissions

- I. An appeal was filed by the appellant (opponent) against the interlocutory decision of the opposition division in which it found that European patent No. 1 602 348 in an amended form met the requirements of the EPC. The appellant requested that the decision under appeal be set aside and the patent be revoked.
- II. The respondent (patent proprietor) requested that the appeal be dismissed or, in the alternative, that the patent be maintained according to one of auxiliary requests 1 to 7 filed with letter dated 4 March 2015.
- III. The following documents, referred to by the appellant in its grounds of appeal, are relevant to the present decision:
- D1 US-A-5 858 151
D2 US-A-2002/0151864
- IV. The Board issued a summons to oral proceedings and a subsequent communication containing its provisional opinion, in which it *inter alia* questioned whether the subject-matter of claim 1 involved an inventive step. It furthermore indicated that the subject-matter of claim 1 of both auxiliary requests 6 and 7 appeared not to meet the requirement of Article 123(2) EPC.
- V. Oral proceedings were held before the Board on 4 December 2018. The final requests of the parties were unchanged from those indicated in points I and II above.
- VI. Claim 1 of the main request reads as follows:

"A method for producing a disposable wearing article, comprising the steps of:
producing an elastic strip material by sandwiching an elastic member between two webs under a stretched state in the longitudinal direction of the webs;
halving the elastic strip material in the widthwise direction so that protrusions and recesses alternately appear;
separating a first elastic strip material and a second elastic strip material obtained by halving in the widthwise direction;
shifting the phases of the first and second elastic strip materials in the longitudinal direction so that the protrusions and the recesses become in phase;
applying a treatment to reduce the shrinking force of the elastic member near the protrusions of the first and second elastic strip materials; and
attaching an absorber onto parts of the first and second elastic strip materials where the shrinking force is reduced."

Claim 1 of auxiliary requests 1 to 5 reads as for claim 1 of the main request.

Claim 1 of auxiliary request 6 reads as for claim 1 of the main request with the following feature appended:

"and folding inwardly opposite widthwise end portions of each of the first and second elastic strip materials so that the opposite end portions are so adhered to front and rear end portions of the absorber as to cover the front and rear end portions of the absorber."

Claim 1 of auxiliary request 7 reads as for claim 1 of the main request with the following features appended:

"applying elastic members for waist to opposite widthwise end portions of each of the first and second elastic strip materials in a state where the elastic members for waist are stretched in the longitudinal direction; and folding inwardly the opposite widthwise end portions so that the opposite end portions are so adhered to front and rear end portions of the absorber as to cover the front and rear end portions of the absorber and so that the elastic members for waist are adhered within the opposite end portions."

VII. The appellant's arguments may be summarised as follows:

The subject-matter of claim 1 of the main request lacked an inventive step. Starting from D2, this solely failed to disclose the phase shift and the deadening of the elastic members. These features addressed different objective technical problems, the solution to that of providing an alternative disposition of protrusions and recesses being known from D1 while the solution to the problem of providing a process for production of an article with a good fit was known from D2 itself.

For the same reasons, auxiliary requests 1 to 5 were also not allowable.

The subject-matter of claim 1 of auxiliary requests 6 and 7 failed to meet the requirement of Article 123(2) EPC. The features added to claim 1 of each request were inextricably linked at least to the features of Step 10 on page 15 of the application as filed which explicitly included features of the absorber and the elastic strip materials.

VIII. The respondent's arguments may be summarised as follows:

The subject-matter of claim 1 of the main request involved an inventive step when starting from D2 and combining this with the teaching of D1. In addition to not disclosing the phase shifting of the first and second elastic strip materials, D2 failed to unambiguously disclose the step of sandwiching the elastic member occurring before the step of deadening the elastic member. Sandwiching the elastic member secured it in a stretched state and enabled an equalisation of tension in the front and back portion and a good fit of the article produced; this was not achieved in D2 since the time at which the elastic members were sandwiched was not specified. Paragraph [0038] of D2, which was the sole disclosure of sandwiched elastic members, related solely to the diaper and its elastic members 23 and 24 rather than to the process for its manufacture with elastic members 64, 66, 73 and 74. Even if the paragraph were considered to implicitly also disclose the process of manufacture, it failed to indicate when in the process the laminate with sandwiched elastic members was formed. The skilled person would also not select the option of cutting the elastic members in D2 as this would not allow the sought good fit of the produced article. The differentiating features of claim 1 over D2 resulted in the objective technical problem of providing a process to produce an article with a good fit. D1 did not provide a hint for the skilled person to solve the problem and arrive at the claimed subject-matter. It did not suggest sandwiching an elastic member prior to cutting it and D1 also taught away from applying a treatment to reduce the shrinking force, the elastic members instead being held in place to avoid

wrinkling of the film strips (see col. 4, lines 13 to 17).

D1 failed to disclose deadening of the elastic members in order to eliminate wrinkling in the article, the elastic members instead being held in place to avoid contraction (col. 4, lines 13 to 17). D2 provided no motivation to phase shift the half webs such that D1 could not provide an obvious teaching of how to amend D2. The cutting of the elastic members in D2 could not anticipate the application of a treatment to reduce the shrinking force of the elastic members since this would not maintain the desired good fit.

The same considerations applied to auxiliary requests 1 to 5 such that the subject-matter of claim 1 of each of these requests respectively also involved an inventive step.

Regarding auxiliary requests 6 and 7, the subject-matter of claim 1 of each of these requests respectively met the requirement of Article 123(2) EPC. The features added to claim 1 were not inextricably linked to the remaining method steps, their application to the method being more general. Page 2 of the description provided a generic disclosure of the invention, with which the added features in claim 1 would be combined without the further method steps.

Reasons for the Decision

1. *Main request*

1.1 *Inventive step (Article 56 EPC 1973)*

The subject-matter of claim 1 does not involve an inventive step.

- 1.1.1 Starting from D2, this discloses the following features of claim 1:

A method for producing a disposable wearing article (see paragraph [0025]; Fig. 6), comprising the steps of:

producing an elastic strip material by sandwiching an elastic member (73, 74) between two webs (see paragraph [0034] lines 1 to 4 where the web can be a composite sheet of fabric and film; if a composite, preferable to sandwich the elastic, see paragraph [0038]) under a stretched state (see e.g. paragraph [0027] first sentence 'fed under a desired extension') in the longitudinal direction of the webs (see Fig. 6); halving the elastic strip material in the widthwise direction so that protrusions and recesses alternately appear (cut line d; see e.g. paragraph [0028]); separating (see dimension D1 in Fig. 6) a first elastic strip material (81) and a second elastic strip material (82) obtained by halving in the widthwise direction; applying a treatment to reduce the shrinking force of the elastic member (see paragraph [0023]; and attaching an absorber (84a or 84b) onto the first and second elastic strip materials (81, 82; see e.g. paragraph [0029]).

- 1.1.2 The respondent's argument that paragraph [0038] of D2 related solely to the diaper and its elastic members 23 and 24 rather than to the process for its manufacture with elastic members 64, 66, 73 and 74 is not accepted. While it is true that this paragraph only explicitly discloses reference signs relating to the diaper, the skilled person would unambiguously see paragraph [0038]

as also relating to the disclosed process. Firstly it is noted that the process depicted in Fig. 6 is explicitly linked to the diaper of Fig. 1 in paragraph [0014], such that the respondent's argued isolation of features present in the diaper from respective features to achieve this in a process for making the same diaper is without basis. Paragraph [0025] refers in a similar manner to the diaper 1 and the process depicted in Fig. 6. Furthermore, paragraph [0033] provides a specific link both between the elastic members 64, 66 used in the process with the elastic members 18, 19 of the waist region of the diaper and between the elastic members 73, 74 of the process and the elastic members 23, 24 of the diaper. Paragraph [0038] would thus be understood by a skilled person as providing a perfectly valid disclosure, also with respect to the Fig. 6 process, of elastic members being interposed between the two layers of sheet material i.e. of the claimed sandwiched strip material construction.

- 1.1.3 Regarding the respondent's argument that D2 failed to unambiguously disclose the step of deadening the elastic member occurring after the step of sandwiching the elastic member, this is not accepted. The composite sheet consisting of a nonwoven fabric and plastic film is one of three disclosed 'stock materials' for the web 61 (see paragraph [0034]). Paragraph [0038] indicates that, in the event of the sheets 2, 3 of the diaper being a laminated sheet material, the elastic members 23, 24 would preferably be interposed between the sheets of the laminate. With reference to Fig. 6, in which the process for making the diaper of Fig. 1 is shown, the only reasonable interpretation of how the process works when a laminate with sandwiched elastic members is used to form the waist region sheets 2, 3 is for the laminate with sandwiched elastic members (23,

24, corresponding to elastic members 73, 74 in the process) to be supplied at the start of the process i.e. at the first step 51 (see Fig. 6 and paragraph [0025]). No technically sensible alternative position in the process for forming the sandwiched elastic members can be seen and indeed, as also argued by the appellant, such alternative position would be counter-intuitive. It directly follows therefore that, with the sandwiched elastic member being necessarily supplied at the start of the process in D2, the step of deadening the elastic member occurs after the step of sandwiching the elastic member.

1.1.4 D2 thus solely fails to disclose the following features of claim 1:

- a. shifting the phases of the first and second elastic strip materials in the longitudinal direction so that the protrusions and the recesses become in phase; and
- b. applying a treatment to reduce the shrinking force of the elastic member near the protrusions of the first and second elastic strip materials and attaching an absorber to these parts.

1.1.5 These two differentiating features do not address a common technical problem such that the formulation of two partial objective technical problems is appropriate. The Board finds, and there was broad agreement between the parties, that (given the existence of only these differences) these may then be seen as:

- a. To provide an alternative disposition of protrusions and recesses; and
- b. To provide a process for production of an article

with a good fit.

The respondent's suggestion that the technical problem involved a reduction in waste is found not to be objective in view of the differentiating features of claim 1 over D2, and was in fact no longer pursued by the respondent at oral proceedings.

1.1.6 As regards the phase shifting of the two elastic strip materials, this has no visible technical effect beyond being an alternative, nor indeed does the patent itself even indicate there to be one, the options of phase shift and no phase shift being included in independent claims 1 and 2 respectively. In search of a solution to the partial problem 'a', the skilled person would refer for example to D1 which, in a process for making a disposable garment (see col. 1, lines 30 to 34) brings two elastic web halves (21A, 21B) into phase (see col. 3, lines 43 to 49; Figs. 2A to 3C) prior to applying an absorbent core (27). It would thus be obvious for the skilled person to solve the first partial objective technical problem by bringing the two half webs (81, 82) of D2 into phase and anticipating the first differentiating feature in 1.1.4 above.

1.1.7 The respondent's argument that D1 failed to disclose a sandwiched elastic member construction with equal elastic tensions in both web halves and thus was not combinable with D2 without exercise of an inventive step is not accepted. The skilled person, when trying to solve the objective problem relating to an alternative disposition of protrusions and recesses would not be dissuaded from considering the teaching of D1 due to construction features of the elastic members which are unrelated to how the protrusions and recesses of the web halves are aligned one with the other

(through phase shifting, see Figs. 3A to 3C). The teaching in D1 regarding alignment of the protrusions and recesses is clearly in isolation from the lack of a sandwiched construction of the film strips (21A, 21B) such that the skilled person would indeed adopt the disclosed phase shift teaching for application in the process of D2 without becoming inventively active.

1.1.8 The respondent's argument that D2 lacked any motivation to phase shift does not address the objection of D1 providing the hint to this modification. D2 indeed does not discuss phase shifting at all. However, the problem / solution approach used in analysing whether an inventive step can be recognised formulates objective technical problem(s) on the basis of feature(s) differentiating the claim from the prior art starting point. The solution to such problem(s) can then be sought in the prior art as a whole, the teaching of the prior art prompting the skilled person, faced with the objective technical problem, to modify or adapt the closest prior art while taking account of that teaching, thereby arriving at the claimed subject-matter. In the present case, the solution to the (only recognisable) problem of providing an alternative disposition of protrusions and recesses is presented in D1 which would thus guide the skilled person to modify D2 by shifting the phases of the half webs without having to exercise an inventive step.

1.1.9 As regards the differentiating feature 'b' above, of 'applying a treatment to reduce the shrinking force of the elastic member ...', and the related problem of 'to provide a process for production of an article with a good fit', the skilled person would be led to an obvious solution in D2 itself. In paragraph [0023] the option of cutting the elastic members in regions A, B

is disclosed which corresponds to the area in which the absorbent pads are located (see Fig. 3). The respondent's argument in this regard that the cutting of the elastic members could not anticipate the claimed 'treatment to reduce the shrinking force', due to this not solving the problem relating to a good fit of the article, is not accepted. How 'a good fit' is to be understood is not elucidated in the patent in suit such that this expression has to be interpreted broadly. As such, the 'close contact' disclosed in relation to the uncut elastic members in paragraph [0023] of D2, does not necessarily imply a good fit, this equally plausibly being achieved through the 'cut elastic members' option where the absorbent pad is then not in such close contact with the wearer's body, for example thus not being wrinkled, such wrinkling of film strips, causing a poor fit, being disclosed as undesirable in D1 col. 4, lines 13 to 17 and this self-evidently applying also to an absorbent pad which is similarly in contact with the wearer's body.

- 1.1.10 As regards the stage in the method at which the absorbent pad of D2 is attached to the first and second half webs (81, 82), this would most logically occur after the elastic member (73, 74) has been deadened, the consequence of which is that the absorbent pad lies unwrinkled in the finished article. If the absorbent pad were secured to the elastic strip materials before the elastic member is deadened, this would result in a wrinkling of the absorbent pad on cutting of the elastic member due to the elastic member remaining between the positions of the cuts still being free to contract thereby contracting/wrinkling the attached absorbent pad with it, unless special measures were to be employed to provide attachment of the core only at locations laterally outside the cuts (for which however

no disclosure exists); the effects of deadening afterwards in this manner would be clearly undesirable and counter-intuitive.

1.1.11 It thus follows that the skilled person, starting from D2 and wishing to solve the objective problem of providing an article with a good fit, would adopt the technical teaching of cutting the elastic members from paragraph [0023] of D2 itself along with the absorbent pad being attached to this area of reduced shrinking force and combine these with the further features of claim 1 known from D2 in order to reach the claimed subject-matter.

1.1.12 In summary therefore, starting from D2 and wishing to solve the two objective technical problems, the skilled person would adopt the technical teaching of both D1 and D2 in order to reach the subject-matter of claim 1 without becoming inventively active. The subject-matter of claim 1 thus lacks an inventive step (Article 56 EPC 1973) such that the main request is not allowable.

2. *Auxiliary requests 1 to 5*

2.1 Claim 1 of each of these requests is identical to claim 1 of the main request. The respondent offered no further arguments in defence of these requests going beyond those already presented with respect to the main request. The Board thus finds that the subject-matter of claim 1 of auxiliary requests 1 to 5 also lacks an inventive step (Article 56 EPC 1973) for the same reasons as those regarding the main request. Auxiliary requests 1 to 5 are therefore also not allowable.

3. *Auxiliary request 6*

3.1 *Article 123(2) EPC*

The subject-matter of claim 1 of auxiliary request 6 does not meet the requirement of Article 123(2) EPC.

3.1.1 The features added to claim 1 have been taken from the detailed description of the method for producing disposable underpants, specifically from page 15 [Step 11] of this method. The method steps 1 to 15 disclosed from page 10 to page 16 all relate to the 'first embodiment' of the invention (see page 10, lines 7 to 9) and as such are all considered to be disclosed in combination. Thus, as also argued by the appellant, at the very least, the features related to the 90° turn of the absorber and the U-turning of the elastic strip materials from [Step 10] of the method on page 15 would need to be included in claim 1 for this to meet the requirement of Article 123(2) EPC.

3.1.2 The respondent's argument that the features added to claim 1 were not inextricably linked to the remaining method steps is unfounded. Nothing in the application as filed supports such a reading of method [Step 11] in complete isolation from the remaining method steps. As indicated in 3.1.1 above, at least the features of [Step 10], relating to the absorber and the elastic strip materials, are inextricably linked to the features added to claim 1, since these features of [Step 10] further detail method steps relating to the already claimed absorber and elastic strip materials.

3.1.3 As regards the respondent's reference to page 2 of the description with the argument that this provided a generic disclosure of the invention with which the added features to claim 1 combined without the further method steps, this is also not accepted. The

'disclosure of the invention' on page 2 is a recitation of the features of claim 1 as originally filed and provides no disclosure of those features now added to claim 1. These are solely to be found in [Step 11] on page 15 for which there is no unambiguous disclosure of the features adopted into claim 1 in combination with the features of claim 1 as originally filed.

3.1.4 The subject-matter of claim 1 thus fails to meet the requirement of Article 123(2) EPC. Auxiliary request 6 is therefore not allowable.

4. *Auxiliary request 7*

Article 123(2) EPC

The further added features to claim 1 relative to claim 1 of auxiliary request 6 are also taken from [Step 11] of the method on page 15 of the application as filed. As found with respect to claim 1 of auxiliary request 6, the features from Step 10 would at the very least need to be included in claim 1 for its subject-matter to meet the requirement of Article 123(2) EPC. Absent these features and any additional arguments of the respondent in this regard, the Board finds the subject-matter of claim 1 of auxiliary request 7 not to meet the requirement of Article 123(2) EPC. Auxiliary request 7 is therefore not allowable.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



M. H. A. Patin

M. Harrison

Decision electronically authenticated