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**Datasheet for the decision
of 13 October 2010**

Case Number: T 0668/09 - 3.2.06

Application Number: 00127842.3

Publication Number: 1110528

IPC: A61F 13/534

Language of the proceedings: EN

Title of invention:

Absorbent article with multiple high absorbency zones

Patentee:

McNeil-PPC, Inc.

Opponent:

The Procter & Gamble Company

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56, 83, 84, 123(2), 123(3)

Keyword:

"Main request and auxiliary requests 1 to 3: novelty -
claim 22 - no"

"Auxiliary request 4 - late filed and not clearly allowable -
not admitted"

"Auxiliary request 5 - claims 1 and 13: clear and originally
filed and sufficiently disclosed; claims 1 and 21: novel and
involving an inventive step"

Decisions cited:

-

Catchword:

-



Case Number: T 0668/09 - 3.2.06

DECISION
of the Technical Board of Appeal 3.2.06
of 13 October 2010

Appellant I: McNeil-PPC, Inc.
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Appellant II: The Procter & Gamble Company
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Representative: L'Huillier, Florent Charles
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
23 January 2009 concerning maintenance of
European patent No. 1110528 in amended form.

Composition of the Board:

Chairman: P. Alting van Geusau
Members: G. de Crignis
K. Garnett

Summary of Facts and Submissions

I. European Patent No. 1 110 528, granted on application No. 00 127 842.3, was maintained in amended form by the opposition division during oral proceedings on 2 December 2008. The reasoned decision was posted on 23 January 2009.

II. Claim 1 as maintained reads as follows:

"An absorbent structure comprising an integral absorbent element (1) having no identifiable laminate layers which are separable from other layers within the element and having an upper surface (2) and a lower surface (4) defining therebetween an absorbent element thickness (6),

the absorbent element further comprising a first high absorbency zone (8) and a second high absorbency zone (10),

the first high absorbency zone (8) being separated from the second high absorbency zone (10) by a portion (12) of the absorbent element thickness,

each of the first and second high absorbency zones (8, 10) comprising a mixture of absorbent fibers (14) and superabsorbent polymer particles (16),

characterized in that the portion (12) of the absorbent element thickness is free of superabsorbent polymer particles (16)."

III. The opposition division held that the subject-matter of this claim 1 (the patentee's second auxiliary request) met the formal requirements (Articles 123 (2) and (3) EPC and 84 EPC) and that the skilled person could carry out the invention (Article 83 EPC). Furthermore, the

subject-matter of claim 1 was considered to be novel (Article 54 EPC) over the disclosure in

D1 EP-A-0,478,011 and

D2 GB-A-2,286,832

and that when starting from D1 and combining it with the teaching of D2 or vice versa, such combination did not lead in an obvious manner to the claimed subject-matter. The same conclusion applied when considering the subject-matter of claims 21 and 22 when starting from D2 and combining it with

D4 US-A-5,750,066.

- IV. On 24 March 2009 appellant I (patent proprietor) filed an appeal against this decision and paid the appeal fee. A statement setting out the grounds of appeal was received at the European Patent Office on 29 May 2009, including a request to maintain the patent as granted.
- V. On 23 March 2009 the appellant II (opponent) filed an appeal against this decision and paid the appeal fee. A statement setting out the grounds of appeal was received at the European Patent Office on 2 June 2009. The grounds of appeal was based on Articles 100(a), (b) and (c), 84, 123 (2) and(3) EPC objections. Revocation of the patent was requested.
- VI. In a communication, annexed to the summons to oral proceedings, the Board questioned whether the subject-matter of the claim 1 fulfilled the requirements of Article 123 (2) EPC.

VII. Oral proceedings were held on 13 October 2010.

The appellant I (proprietor) requested that the decision under appeal be set aside and that the patent be maintained as granted, alternatively on the basis of the first, second or third auxiliary requests filed with letter dated 13 September 2010 or the fourth or fifth auxiliary requests filed during the oral proceedings.

The appellant II (opponent) requested that the decision under appeal be set aside and that the patent be revoked.

Claim 22 of the main request and of auxiliary requests 1 to 3 has the following wording:

"A method for applying a first particulate material (16) and a second particulate material (16) to a substrate, the method comprising the steps of:

- providing a substrate;
- providing a continuous supply of first particulate material (16) from a first supply source (172) to a first valve (159) having a powder application phase and a recycle phase;
- disposing the first valve (159) to the powder application phase to allow passage of first particulate material (16) by free-fall therethrough;
- dispensing the first particulate material (16) through the first valve (159) onto at least a portion of a surface of the substrate;
- disposing the first valve (159) to the recycle phase to prevent dispensing of first particulate material (16) onto the substrate and to retain the

first articulate material (16) within the first valve (159);

- conveying the first particulate material back to the first supply source (172);
- providing a continuous supply of particulate material from a second supply source to a second valve (159') having a powder application phase and a recycle phase;
- disposing the second valve (159') to the powder application phase to allow passage of first particulate material (16) by free-fall therethrough;
- dispensing the first particulate material (16) through the second valve (159') onto at least a portion of a surface of the substrate;
- disposing the second valve (159') to the recycle phase to prevent dispensing of second particulate material (16) onto the substrate and to retain the second particulate material (16) within the second valve (159'); and
- conveying the second particulate material (16) back to the second supply source."

Claim 22 of auxiliary request 4 specifies the first and second valves as "of the apparatus of claim 21".

Auxiliary request 5 differs from auxiliary request 4 in that claim 22 is deleted.

Claim 1 of auxiliary request 5 differs from claim 1 as maintained in that the characterizing portion specifies the portion of the absorbent element thickness being "substantially" free of superabsorbent polymer particles. Claim 13 is amended accordingly.

Claim 21 of all requests reads:

"An apparatus for intermittently applying a particulate material (16) to a substrate, the apparatus comprising two applicator valve assemblies (159, 159'), each applicator valve assembly (159, 159') comprising a stationary funnel (174) having an opening and positioned within a moveable housing (176) such that the moveable housing (176) is free to move relative to the stationary funnel (174), the moveable housing (176) comprising at least one slot opening (178) and at least one recycle hole (182) spaced from the slot opening (178), wherein the moveable housing (176) moves relative to the stationary funnel (174) to provide an application phase to allow passage of particulate material (16) by free-fall through the stationary funnel opening and the slot opening (178) when the stationary funnel opening aligns with the slot opening (178), and a recycle phase to prevent dispensing of particulate material (16) onto the substrate when the stationary funnel opening aligns with the at least one recycle hole (182)."

VIII. The arguments of appellant I (patent proprietor) may be summarised as follows:

The method of independent claim 22 is novel. None of the cited documents disclosed a method applying a first and a second valve for dispensing particulate materials in combination with recycle phases. In this respect the skilled person would not consider the belt 18 in D2 to represent a valve within the meaning of the patent in suit.

With regard to auxiliary request 4, the amendment in claim 22 to include in the method the apparatus such as claimed in claim 21 and shown in Figure 9 of the patent in suit was based upon paragraph [0051] of the description. In this paragraph, the apparatus for making the absorbent element illustrated in Figure 9 was linked to the method. Hence, the requirements of Article 123 (2) EPC were met.

Claim 1 included the term "substantially" with regard to the absence of superabsorbent polymer particles which was consistent with claim 1 as originally filed. The re-introduction of this term could not violate the requirements of Article 123 (3) EPC since it had always been within the scope of the granted claims, in particular when taking into account claims 11 and 12 as granted which included this term.

The completion of the feature of claim 1 concerning the absorbent element having no identifiable laminate layers "which are separable from other layers within the element" represented a clarification and limitation. Concerning sufficiency of disclosure, all objections which were raised in fact represented clarity objections rather than that sufficiency of disclosure was concerned.

The subject-matter of claim 1 was novel. The closest prior art as represented by D2 did not disclose a unitary integral absorbent element including a mixture of absorbent fibres and superabsorbent particles.

The subject-matter of claim 1 also involved an inventive step. When starting from the prior art

disclosed in D2, the problem to be solved was to provide an alternative absorbent element.

When discussing inventive step, D1 should additionally be taken into account. D1 suggested the use of a gradient of particulate material within the absorbent fibres. The embodiment shown in Figure 6 had a concentration minimum of particulate material in the middle portion. Taking into account the disclosure of D1, the skilled person would not simply use the known element as an alternative to the layered bodies shown in D2. These known absorbent elements were constructed as multi-layered elements and the layers could not be replaced in the manufacturing method illustrated by Figure 2 of D2 via a body including particulate material in a concentration gradient.

The subject-matter of claim 21 also involved an inventive step. D2 disclosed a belt-driven mechanism for the application of particulate material and neither a moveable housing nor a stationary funnel was present. Moreover, neither D2 nor D4 concerned an apparatus comprising two applicator valve assemblies.

IX. The arguments of appellant II (opponent) may be summarised as follows:

The subject-matter of independent claim 22 was not novel. D2 disclosed in its Figure 2 a method including two applicator devices which were functionally identical to the claimed valves. Figure 3 of D2 showed these applicator devices including a recycling of the particulate material and the particulate material was dispensed in free fall manner.

With regard to auxiliary request 4, the original disclosure did not include any link of the apparatus shown in Figure 9 to the claimed method. Moreover, the claimed method did not include any reference to absorbent fibres, whereas in the description only a method including this feature was disclosed. Hence, claim 22 comprised an intermediate generalisation and the requirements of Article 123 (2) EPC were not met. Therefore this late-filed request should not be admitted.

Concerning the subject-matter of claims 1 and 13, the added feature of "which are separable from the other layers within the element" was not clear (Article 84 EPC). The Figures showed identifiable layers and it was not clear under which conditions the term "separable" had to be considered. The addition of the term "substantially" to the wording "free of superabsorbent polymer particles" was unclear and extended the scope versus the granted claim, an amendment in conflict with Article 123 (3) EPC.

Furthermore, the skilled person did not know whether he was working within the subject-matter of claim 1 as it included undefined subject-matter. On the one hand the term "high" in "high absorbency zones" was a relative term and could not be determined exactly. On the other hand the portion being "substantially free of superabsorbent polymer particles" remained undefined.

The subject-matter of claim 1 was not novel with regard to D2, in particular when considering the embodiments described in relation to Figures 1 and 4. According to

the patent in suit the layers were compressed at least by vacuum forces and the resultant absorbent structure obtained by the manufacturing methods of either the patent in suit or D2 were similar.

Anyhow, the subject-matter of claim 1 did not involve an inventive step when starting from either D1 or D2 as closest prior art.

D1 suggested the use of a gradient of particulate material within the absorbent fibres and the embodiment of Figure 6 had a concentration minimum of particulate material in the middle portion. The skilled person could simply extend this minimum to zero and arrive without any inventive activity at the claimed absorbent element.

Either D2 or D4 could be seen to represent the closest prior art with regard to the apparatus claim 21. Starting from D2, the skilled person looking for an alternative particle applicator could replace the belt 18 particle dispenser by the applicator device of D4 which included a valve assembly in conformity with the one claimed. Therefore no inventive step was necessary to arrive at the combination of features claimed in claim 21.

Reasons for the Decision

1. The appeal is admissible.

2. Main request - Claim 22 - novelty

2.1 The method which is the subject-matter of claim 22 concerns exclusively the two-fold application of particulate material to a substrate. It is not linked to any characteristic of an absorbent structure and hence is to be considered completely independent of the subject-matter of the other claims in this request.

2.2 D2 shows in its Figure 2 an arrangement for manufacturing absorbent bodies including the delivery of particulate material onto a substrate of fibrous bodies. The arrangement includes three mat-forming wheels provided with moulds which are filled successively with cellulose fibres. Two such bodies formed in the moulds are deposited onto an underlying moving conveyor belt and conveyed beneath two particle applicator devices which deposit particles in a specific pattern; the third moulded body is formed by another mat-forming wheel and placed on top of the previous layers. The composite body finally passes through a pair of compression rollers.

2.3 The applicator device for dispensing the particulate material of this manufacturing method is disclosed in an enlarged view in Figure 3 of D2. A belt with a pattern of openings dispenses the particles in an interrupted manner through these openings to the moulded bodies. The particles can fall freely through the openings onto the moulded bodies. At the end of the belt a device for recycling the superfluous particles resting on closed parts of the belt is shown which directly returns these particles to the dispensing funnel.

2.4 Appellant I argued that the device in D2 did not represent a valve since it relied on a belt mechanism. However, the crucial feature characterising a valve is the possibility of either allowing or stopping flow. The belt 18 in D2 clearly allows for a powder application phase and for a recycle phase and since nothing else in the claim is present to distinguish the subject matter claimed from the method for applying particulate material disclosed in D2, the claimed method lacks novelty.

2.5 Appellant I further disputed that a recycling phase was present in D2. However, Figure 3 of D2 leaves no room for any other interpretation than that of the return of the superfluous particles to the dispenser. Although no literal support for such a feature is present in D2, Figure 3 is unambiguous and clear in this respect and the proprietor failed to provide any evidence that such a particle applicator as illustrated and described in SE-B-468305, as referred to on page 8 line 1 of D2, would lack this feature.

3. Auxiliary requests 1 to 3

Claim 22 is present in the main request and in auxiliary requests 1 to 3. Accordingly, none of these requests is allowable for lack of novelty of the respective claims 22.

4. Auxiliary request 4

4.1 Auxiliary request 4 was filed during the oral proceedings, hence at the latest possible state in the

proceedings. According to Article 13 (1) of the Rules of Procedure of the Boards of Appeal (RPBA), it lies within the discretion of the Board to admit such a late filed request into the proceedings. In order to be admitted the request at least should be clearly allowable, which is not the case for the following reasons.

The question arises whether the amendment of the method of claim 22 of auxiliary request 4 specifying the first and second valves as "of the apparatus of claim 21" is allowable under Article 123 (2) EPC. In this respect the following is noted.

- 4.2 The wording of the originally filed apparatus and method claims (claims 23 and 24) is identical to the granted apparatus and method claims (claims 21 and 22) with the exception that the latter claims include reference signs. Concerning originally filed method claim 24, the steps defined in this method refer generally to the provision of an undefined substrate and the provision, dispensing and recycling of undefined particulate materials. Concerning originally filed apparatus claim 23, it refers to an apparatus which is suitable for dispensing particulate material. This apparatus is specific in that it comprises two valve assemblies in a moveable housing and enables recycling of the particulate material.
- 4.3 The subject-matter of originally filed independent claims 23 and 24 was not linked to each other or to the absorbent structure or article of the previous claims.

4.4 Moreover, no part of the description refers to the method in the general form in which it is claimed. Paragraph [0051] of the description cited for support of such a combination (corresponding to p. 31, l. 13 - 17 of the originally filed description) concerns the apparatus illustrated in Figure 9 and an absorbent element being prepared according to the method described in the following text. This method includes the use of wood pulp for the absorbent element in the form of a compressed sheet. Moreover, in the following paragraphs further details of this method are specified (*inter alia* clockwise rotation of the forming wheel and a rotary particle applicator valve) which do not form features of the claimed method.

4.5 The amended method claim does not include such details and in the absence of a disclosure of a more general method using the claimed apparatus, claim 22 includes added subject-matter in the meaning of Article 123 (2) EPC.

5. Auxiliary Request 5 - Independent Claims 1 and 13

5.1 Amendments

Claims 1 and 13 of auxiliary request 5 were amended with regard to claims 1 and 13 as granted in that they additionally include the feature concerning the integral absorbent element having no identifiable laminate layers "which are separable from other layers within the element" and in that the portion of the absorbent element thickness is specified as being "substantially" free of superabsorbent polymer particles.

5.1.1 "separable" - Article 123(3) EPC / Article 84 EPC

Claim 1 (and 13) requires that the absorbent element is integral. "Integral" is defined in the patent in suit as referring to a unitary structure wherein the absorbent fibres are intermeshed throughout the entire absorbent element (col. 3, l. 31 - 34). The feature of claim 1 that the absorbent element has no identifiable laminate layers which are separable from other layers within the element has to be considered as a characteristic of such an integral absorbent element.

The term "laminate" layers is commonly understood as a layered structure. The individual layers may be constituted of the same or different material(s). Hence, laminate layers are not compatible with the above defined concept of a unitary structure.

The subject-matter of claim 1 includes the further feature that the integral absorbent element comprises two high absorbency zones which comprise a mixture of absorbent fibres and superabsorbent polymer particles. The surfaces of the high absorbency zones are not, per se, identifiable surfaces (col. 3, l. 36 - 38). Accordingly, it is not possible to define a boundary between the high absorbency zones and the adjacent zones. Consistent with this, all the figures constitute sketches which show an overall fibrous absorbent element having zones of superabsorbent particles intermingled with the absorbent fibres. Although it may be possible to tear such a unitary absorbent element apart, such tearing will result in an irregularly

structured absorbent element but not one with recognizable layers.

Hence, the completion of the feature "having no identifiable laminate layers" by adding "which are separable from other layers" makes it clear that the integral absorbent element is of unitary structure. This amendment is based upon page 5, l. 18 - 23 of the original disclosure and also limits the absorbent element to such a structure. Hence, for this amendment the requirements of Articles 84, 123 (2) and Rule 80 EPC are met. The scope of protection is more limited and hence, does not extend the protection conferred by the granted patent (Article 123 (3) EPC).

5.1.2 "substantially" - Article 84 EPC / Article 123 (3) and Article 69 (1) EPC

In accordance with Article 69 (1) EPC the extent of the protection conferred by a European patent shall be determined by the claims.

Claims 1 and 13 of the claims as granted refer in the characterizing part to the portion of the absorbent element thickness which "is free of superabsorbent polymer particles (16)", whereas claims 11 and 12 refer to these portion(s) of the absorbent element thickness as being "substantially free of superabsorbent polymer particles (16)". The claim with "substantially free of superabsorbent" gives a broader scope of protection than "free" because it defines a range from a small negligible amount of superabsorbent to virtually zero ("free"). Furthermore, since the portion 12 mentioned in claim 1 is in fact the first portion of claim 11,

the patent as granted already contained the option that the portion 12 of claim 1 is "substantially" free of superabsorbent rather than just "free" . This means that the amendment to bring the term "free" back into "substantially free" in claim 1 does not extend the protection and does not infringe the requirements of Article 123 (3) EPC.

Since in the application as originally filed the corresponding independent claims 1 and 15 referred to the portion of the absorbent element thickness being "substantially free of superabsorbent polymer particles", no objections arise under Article 123 (2) EPC either.

5.2 Claim 1 - Article 83 EPC

The following issues were raised in respect insufficient detail for the skilled person to carry out the invention:

- how to identify that the absorbent element did not have identifiable laminate layers ?
- how to identify the high absorbency zones when no boundaries for the portion between the two high absorbency zones are defined ?
- which absorbency zones are "high absorbency zones" ?
- when is a portion "substantially free of" superabsorbent polymer particles ?

The definition of the terminology "integral" for an integral absorbent element is present in col. 3, l. 31 - 36 of the patent in suit. It defines the absorbent element as a unitary structure having absorbent fibres intermeshed throughout the entire

element. When intermeshing the absorbent fibres throughout the entire element, no separate or separable layers can be present.

It is not necessary to define the boundaries for the portion separating the two high absorbency zones since the thickness of the portion which is substantially free of superabsorbent polymer particles is not defined. Hence, any portion which can be identified by any means (for example visually, via microscope) to have the required characteristic is sufficient to identify the high absorbency zones.

Although the term "high" for the high absorbency zones is a relative term and cannot be determined exactly, the skilled person would understand "high" to mean that superabsorbent polymer particles should be present in a concentration such as to have a meaningful effect. Accordingly, although no exact definition of these zones is given, the skilled person in the art of absorbent structures would be capable of identifying such zones, in particular in combination with the remaining parts of the fibrous absorbent element. Hence this issue at most concerns clarity of a feature already present in the granted claim but does not affect sufficiency of disclosure.

As already set out above in relation to the boundaries, a portion is "substantially free of" superabsorbent polymer particles when the skilled person can recognize by any available means (for example by analytical tools such as microscopes) that only marginal amounts of small particles are present which have for example

slipped unintentionally through the fibrous network of the absorbent element.

Accordingly, none of the points raised establishes a lack of sufficient disclosure and the requirements of Article 83 EPC are fulfilled.

5.3 Claim 1 - novelty

D2 discloses a method for manufacturing an absorbent body comprising several layers of cellulose material having layers of superabsorbent particles in between. Figures 4B and 4D show such resultant layered absorbent element having a thickness which is substantially free of superabsorbent polymer particles between zones consisting only of superabsorbent particles. The central issue of the invention in D2 is to use a particle dispenser which applies the superabsorbent polymer particles in the desired pattern onto the moulded bodies of cellulosic fluff. According to Figures 1a and 2, the final absorbent elements are densified to a certain extent by passing the layered bodies through the final compression rollers. The figures show that even after such densification there is no mixture of absorbent fibres and the superabsorbent polymer particles provided and intended for the high absorbency zones.

In contrast to these absorbent elements, the subject-matter of claim 1 requires the absorbent element to comprise a mixture of absorbent fibres and superabsorbent polymer particles in the first and second high absorbency zones. Hence, the subject-matter of claim 1 is novel over D2.

5.4 Claim 1 - inventive step

5.4.1 D1 and D2 are both suitable for representing the closest prior art. Both documents disclose absorbent elements based upon absorbent fibres and superabsorbent polymer particles.

5.4.2 D1 discloses an absorbent article having a continuous concentration gradient of the superabsorbent particles throughout the entire absorbent element. Figure 10 of D1 shows prior art absorbent structures and their substantially uniform distribution of superabsorbent particles throughout the article or the known alternative of the superabsorbent particles being restricted to a discrete layered zone. Starting from such prior art absorbent structures, D1 teaches to provide the superabsorbent particles in a continuous concentration gradient. Figures 6 and 8 of D1 show a continuous gradient for the distribution of superabsorbent particles having a minimum in the middle portion of the thickness of the article. D1 addresses the problem of gel-blocking and how to avoid it by, additionally to the concentration gradient, locating increased concentrations of superabsorbent in selected regions of the absorbent structure (p. 4, l. 14 - 20).

5.4.3 The difference with regard to the claimed subject-matter is the distribution of the superabsorbent polymer particles in the absorbent article. Hence, the objective problem is the provision of an alternative distribution of the superabsorbent polymer particles within the absorbent element of D1. The solution according to claim 1 of the patent in suit is to

provide the superabsorbent polymer particles in two high absorbency zones which are separated from each other by a portion which is substantially free of superabsorbent polymer particles.

- 5.4.4 When starting from D1 and looking for an alternative distribution of superabsorbent polymer particles, the skilled person would not consider the provision of superabsorbent particles in a restricted area or layered zone since this is already disclosed as prior art in D1 (Figure 10) and objected to with regard to gel-blocking (D1: p. 4, l. 14 - 16).
- 5.4.5 D2 does not disclose zones or portions having absorbent fibres which are intermingled with the superabsorbent polymer particles but rather separate layers and/or zones. The implementation of a separate layer containing the superabsorbent particles within the absorbent element has already been dismissed in D1 with regard to its negative input for gel-blocking. There is no suggestion that the concentration should approach zero in D1. Hence, the skilled person would not have had any reason to combine the teaching of these documents nor in any event would the combination result in the claimed alternative. Hence, the skilled person would not arrive in an obvious manner at the specific composition claimed in claim 1 under consideration (or claim 13 either - referring to the absorbent article comprising a structure of claim 1).
- 5.4.6 In the alternative, when starting from the disclosure of D2, the absorbent structure of claim 1 differs from the absorbent structure disclosed therein - as already set out above under novelty - in that the

superabsorbent polymer particles are mixed with the absorbent fibres. D2 discloses a manufacturing method for a layered absorbent article. It is concerned with the liquid-receiving properties in order to minimize the risk of leakage. In particular, the liquid transport properties for subsequent liquid discharges are considered.

5.4.7 The objective problem to be solved can be related to the difference, and concerns the avoidance of gel blocking such as specified in the patent in suit (paragraph [0004]). The solution according to the patent in suit is to mix the absorbent fibres and the superabsorbent polymer particles in two distinct high absorbency zones which are separated from each other by a portion which is substantially free of superabsorbent polymer particles. Hence, the superabsorbent polymer particles cannot form a gel on the one hand because the particles are distributed in the fibrous matrix and on the other because they are separated from each other by the portion without such particles.

5.4.8 D1 shows in all its inventive embodiments an absorbent element having a continuous concentration gradient of superabsorbent particles distributed in a fibrous matrix. The argument of the appellant II (opponent) was that one embodiment of D1 (Figure 6) shows a gradient having a minimum of concentration of superabsorbent particles in the middle portion and such an embodiment could lead the skilled person to extend the minimum to such an extent that there were substantially no superabsorbent polymer particles and, accordingly, no differences with respect to the claimed sequence of zones.

5.4.9 However, although apparently the same problem is solved via this embodiment shown in D1, the central teaching of D1 is the continuous concentration gradient of the superabsorbent polymer particles. Hence, a skilled person who considered the concepts of D2 and D1 would see that these concepts are basically incompatible. D2 discloses a layered construction obtained by a specific manufacturing method including separate layers.

5.4.10 Therefore, when starting from D2 and considering the implementation of a continuous gradient of superabsorbent polymer particles into the absorbent element such as disclosed in D1, the concept of a pattern of fluff layers and superabsorbent layers would have to be abandoned. Accordingly, the resultant article would no longer have such a pattern of alternating high and low absorbency zones but a gradient of superabsorbent particles. Hence, the skilled person when combining the teaching of these documents would not arrive in an obvious manner at the specific composition claimed in claim 1 (and also claim 13 - referring to the absorbent article comprising a structure of claim 1) under consideration.

5.4.11 No other documents were considered by either party as being relevant. Consequently the subject-matter of claims 1 and 13 involves an inventive step (Article 56 EPC) in respect of the prior art cited by the appellant.

5.5 Claim 21 - inventive step

5.5.1 None of the cited documents discloses an applicator apparatus with the specific features of claim 21. Accordingly, novelty was not in issue.

5.5.2 D2 represents the closest prior art. It discloses in its Figure 2 an arrangement for continuous manufacturing of absorbent bodies and illustrates in Figure 3 in enlarged form the particle dispenser used in this method. The particles are deposited in a specific pattern via the hole pattern of the belt of the applicator device. This belt comprises a sequence of rows of slot-like openings through which the particles are dispensed and fall down onto the passing moulded bodies which are on an underlying moving conveyor belt whose speed is synchronized. This action is repeated a second time after a second moulded body is placed on top of the first layer of particles carried by the first moulded body.

5.5.3 The apparatus of claim 21 differs from the particle dispenser disclosed in D2 in that

- (a) each applicator valve assembly comprises a moveable housing;
- (b) the moveable housing is free to move relative to the stationary funnel;
- (c) the moveable housing moves relative to the stationary funnel providing an application phase to allow passage of particulate material by free-fall through the stationary funnel opening and the slot opening when the stationary funnel opening aligns with the slot opening.

- 5.5.4 Having regard to these features, the objective technical problem to be solved is to be seen in the provision of alternative valve mechanisms for the belt applicators of D2. The solution to this problem is to provide the applicator device specified in the claim.
- 5.5.5 D4 discloses an apparatus and a method for providing an absorbent fibrous structure having discrete particles intermingled within it. The apparatus includes a rotating mask and a means for directing a supply stream of particles to form an acute included angle with a diverting surface on the rotating mask. The diverting surface splits the supply stream of discrete particles into a first intermittent stream passing through the mask and a second intermittent stream deflected by the diverting surface. The particles in one of the first and second intermittent streams are directed to the fibrous web.
- 5.5.6 However this known valve does not have a rotating housing as specified in the claim under consideration; clearly the valve housing walls 150 and 160 of the enclosure 140 of the valve in D4 are stationary and the rotating part is the mask 100 driven by motor 104 (see col. 9, l. 6 - 15 and Figure 4 and 5 of D4). Rather the valve shown in D4 is of a totally different shape than the one specified in the claim.
- 5.5.7 Therefore, when starting from D2 and replacing the applicator devices by the ones known from D4, the skilled person would not arrive at the claimed subject matter. Since no other valves coming closer to the claimed design are disclosed or suggested in the cited

prior art the subject-matter of claim 21 involves an inventive step (Article 56 EPC)

6. Since the independent claims 1, 13 (equivalent to claim 1) and 21 as well as their dependent claims also meet the requirements of the EPC, the patent can be maintained in amended form.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division with the order to maintain the patent on the basis of:
 - (a) claims 1 to 21 according to the fifth auxiliary request filed during the oral proceedings;
 - (b) Pages numbered 2 to 10 of the description filed during the oral proceedings;
 - (c) Figures 1 to 12 as granted.

The Registrar

The Chairman

S. Sánchez Chiquero

P. Alting van Geusau