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Datasheet for the decision of 28 January 2025

Case Number: T 0481/23 - 3.2.06

Application Number: 16743578.3

Publication Number: 3251642

IPC: A61F13/49, A61F13/496, A61F13/514

Language of the proceedings: EN

Title of invention:
ABSORBENT ARTICLE AND METHOD FOR MANUFACTURING SAME

Patent Proprietor:
Daio Paper Corporation

Opponent:
Essity Hygiene and Health AB

Headword:

Relevant legal provisions:
EPC Art. 100(c), 123(2)
RPBA 2020 Art. 13(2)

Keyword:
Amendments - added subject-matter - Main request, Auxiliary Request 10* - (yes)
Amendment after notification of Art. 15(1) RPBA communication - taken into account (no)

Decisions cited:
T 2352/19

Catchword:

Europäisches Patentamt
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Beschwerdekammern

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Case Number: T 0481/23 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 28 January 2025

Appellant: (Opponent)	Essity Hygiene and Health AB 405 03 Göteborg (SE)
Representative:	Hoffmann Eitle Patent- und Rechtsanwälte PartmbB Arabellastraße 30 81925 München (DE)
Respondent: (Patent Proprietor)	Daio Paper Corporation 2-60 Mishimakamiya-cho Shikokuchuo-shi Ehime 799-0492 (JP)
Representative:	Meissner Bolte Partnerschaft mbB Patentanwälte Rechtsanwälte Postfach 86 06 24 81633 München (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 23 December 2022 rejecting the opposition filed against European patent No. 3251642 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	P. Cipriano
Members:	M. Hannam
	J. Hoppe

Summary of Facts and Submissions

I. An appeal was filed by the appellant (opponent) against the decision of the opposition division rejecting the opposition to European patent No. 3 251 642. It requested that the decision under appeal be set aside and the patent be revoked.

II. In its reply to the appeal, 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 11.

III. The Board issued a summons to oral proceedings and a subsequent communication containing its provisional opinion, in which it indicated *inter alia* that the subject-matter of claim 1 and claim 3 of the main request appeared to extend beyond the content of the application as filed and that none of the auxiliary requests seemed to overcome this objection.

IV. With letter of 21 January 2025 the respondent filed further auxiliary requests 10A to 10I.

V. Oral proceedings were held before the Board on 28 January 2025, during which the appellant withdrew auxiliary requests 1 to 11 filed with the reply to the appeal and filed a new auxiliary request 10*. At the close of the oral proceedings the parties requests were thus as follows:

The appellant requested that the decision under appeal be set aside and the European patent be revoked.

The respondent requested

- that the appeal be dismissed, i.e. that the patent be maintained as granted (main request), or as an auxiliary measure,
- that the patent be maintained in amended form based on one of the following auxiliary requests in the given order:
    - auxiliary request 10*, filed at the oral proceedings before the Board or
    - auxiliary requests 10A to 10I, filed with letter of 21 January 2025.

VI. Claim 1 of the main request, with added feature annotation as used by the opposition division in its decision, reads as follows:

1.1 An absorbent article having an absorber that absorbs excrement,
1.2 the absorbent article comprising an elastic film stretchable structure (20X) in which an elastic film (30) is stacked between a first sheet layer (20A) and a second sheet layer (20B), and
1.3 the first sheet layer (20A) and the second sheet layer (20B) are joined via through holes (31) penetrating the elastic film (30) at a large number of sheet bond portions (40) arranged at intervals, wherein
1.4 a region having the elastic film stretchable structure (20X) includes a stretchable region (80) stretchable in one direction and a non-stretchable region (70) provided at least at one side of the stretchable region (80) in a stretching and contracting direction,
1.5 the stretchable region has the through holes (31) and a section in which the elastic film (30) linearly continues along the stretching and contracting direction,
1.6 the stretchable region (80) is contracted in the

stretching and contracting direction by a contraction force of the elastic film (30) while it is possible that the stretchable region (80) is stretched in the stretching and contracting direction,
1.7 the non-stretchable region (70), due to presence of the through holes (31), does not have a section in which the elastic film (30) linearly continues along the stretching and contracting direction, even though the elastic film (30) of the non-stretchable region (70) continues in the stretching and contracting direction, and
1.8 in the non-stretchable region (70), an elongation at an elastic limit in the stretching and contracting direction is set to 120% or less.

The respective wording of claim 1 of each of auxiliary request 10* and auxiliary request 10A to auxiliary request 10I is appended to this decision.

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

Main request

The ground for opposition under Article 100(c) EPC prejudiced the maintenance of the patent as granted. Feature 1.8 of claim 1 did not find basis in claim 5 as filed due to only the first of the two disclosed elastic limits in claim 5 having been included in claim 1. Paragraph [0017] as filed failed to provide basis since this paragraph also disclosed both elastic limits in combination being 'appropriately determined'. The respondent's further reference to paragraphs [0104] and [0108] also failed to provide a direct and unambiguous basis for feature 1.8 since both paragraphs were part of a 'first mode' of the invention, spanning from paragraphs [0087] to [0114]. The isolation for

inclusion in claim 1 of the elastic limit for the non-stretchable region from the combined disclosure of the elastic limit for the stretchable region and the non-stretchable region in the first mode of the invention thus represented an unallowable intermediate generalisation of the application as filed.

Auxiliary request 10*

The subject-matter of claim 1 did not meet the requirement of Article 123(2) EPC. As a consequence of the amendment made in feature 1.5 that the stretchable region 'has the through holes', feature 1.7 had to be interpreted that due to the presence of the through holes in the stretchable region, the non-stretchable region does not have a section in which the elastic film linearly continues along the stretching and contracting direction. This however lacked basis in the application as filed. This interpretation of claim 1 however made linguistic sense due to feature 1.5 unambiguously reciting that the stretchable region has 'the through holes' which had their antecedent in feature 1.3. This interpretation also made technical sense to the skilled person since feature 1.7 was formulated as a result to be achieved and it was not incomprehensible that holes present in the stretchable region could have an impact on a linear continuity of the elastic film in the non-stretchable region.

Auxiliary requests 10A to 10I

These should not be admitted under Article 13(2) RPBA. No exceptional circumstances justified their admittance. As regards auxiliary request 10A, the Board had not introduced a new interpretation of feature 1.7; it had simply agreed with the appellant's objection. As

regards auxiliary request 10B, the Board had also not introduced a new objection, rather its summary of why feature 1.4 of claim 1 was known from D1 had simply used slightly different terminology. The remaining auxiliary requests were based on auxiliary requests 10A or 10B and so similarly there were no exceptional circumstances pursuant to Article 13(2) RPBA.

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

Main request

The subject-matter of claim 1 did not extend beyond the content of the application as filed. Feature 1.8 had basis in paragraphs [0016] and [0017] as filed. The parameters for elongation at the elastic limits were not obligatorily linked such that the non-stretchable region alone could be included in claim 1. Paragraph [0108] also separately disclosed the elastic limit in the non-stretchable region and was not linked to the disclosure in paragraph [0104] of the elastic limit in the stretchable region.

Auxiliary request 10*

The subject-matter of claim 1 met the requirement of Article 123(2) EPC. From feature 1.3 of claim 1 it was clear that the through holes were located both in the stretchable and the non-stretchable regions. Feature 1.5 addressed the through holes in the stretchable region whilst feature 1.7 addressed those in the non-stretchable region. Figs. 9 and 11 and paragraphs [0100] to [0102] of the application as filed clarified how the arrangement of through holes in the stretchable and non-stretchable regions of the article were to be

understood, which matched the above interpretation of through holes also being present in the non-stretchable region. The appellant's argument that feature 1.7 related to holes in the stretchable region influencing the elastic behaviour of the non-stretchable region was non-sensical such that this interpretation had to be dismissed. A correct interpretation of features 1.3, 1.4, 1.5 and 1.7 in conjunction thus resulted in claim 1 having basis in the application as filed.

Auxiliary requests 10A to 10I

Exceptional circumstances of the case justified these requests being taken into account under Article 13(2) RPBA. In point 1.1.2 of its communication under Article 15(1) RPBA, the Board indicated that claim 1 left the existence of through holes in the non-stretchable region open. This was a new interpretation of claim 1 which thus justified the filing of auxiliary request 10A to overcome this new factual situation. Similarly, in point 3.2.3 the Board, contrary to both parties, had found D1 to disclose feature 1.4. This was thus also an exceptional circumstance justifying the filing of auxiliary request 10B. The further auxiliary requests simply combined features from the claims of auxiliary requests 10A and 10B such that these should also be admitted.

Reasons for the Decision

1. *Main request*

Article 100(c) EPC

1.1 The subject-matter of claim 1 has been amended relative to claim 1 as filed *inter alia* through the addition of feature 1.8 which defines that
'in the non-stretchable region, an elongation at an elastic limit in the stretching and contracting direction is set to 120% or less'.

1.2 The respondent indicated the basis for this amendment to be claim 5, paragraph [0017], and paragraphs [0104] and [0108] of the application as filed.

1.3 Claim 5 as filed reads as follows:

'The absorbent article according to any one of claims 1 to 4, wherein
in the stretchable region, an elongation at an elastic limit in the stretching and contracting direction is set to 200% or more, and
in the non-stretchable region, an elongation at an elastic limit in the stretching and contracting direction is set to 120% or less'.

Claim 5 thus clearly recites the elongation at an elastic limit of the stretchable region and the non-stretchable region together. The claim seen alone therefore provides no basis for solely the elongation at an elastic limit of the non-stretchable region to be taken-up into claim 1 in isolation from the elastic limit of the stretchable region.

1.4 The respondent's argument that the claim explicitly recites that the elongations at an elastic limit for the two regions can be varied independently is not of relevance for the question whether the elastic limit in the non-stretchable region is disclosed in isolation from that in the stretchable region. Even though the elastic limits can be changed within the claimed ranges independently of one another, the elastic limit range of each region is disclosed in claim 5 solely in combination, the conjunction 'and' in claim 5 unambiguously providing the mandatory link between the two. Thus, claim 5 discloses a combination of the elongation at an elastic limit in the non-stretchable and the elongation at an elastic limit in the stretchable region.

1.5 The respondent's further reference to paragraph [0017] of the application as filed fails to provide the requisite direct and unambiguous disclosure for feature 1.8. Again the conjunction 'and' is used in paragraph [0017] to link appropriate determination of the elastic limits in both the stretchable region and the non-stretchable region. Nothing in this paragraph allows a conclusion to be drawn that the elongation at an elastic limit for the non-stretchable region alone may be taken-up into claim 1 in isolation of the elastic limit for the stretchable region.

1.6 The respondent's argument that paragraph [0108] also separately disclosed the elastic limit in the non-stretchable region and was not linked to the disclosure in paragraph [0104] of the elastic limit in the stretchable region is not accepted. As also pointed out by the appellant, both paragraph [0104] and paragraph [0108] belong to a 'first mode' of the invention or, in more usual terminology for patent specifications, a

'first embodiment' of the invention. Consequently the disclosures in paragraphs [0104] and [0108] would not be seen by the skilled person reading the description as isolated disclosures, but rather as a combined disclosure forming an integral part of the first embodiment of the invention. The respondent did not indicate any part of the application as filed which would suggest to the skilled person that these two paragraphs could be viewed separately from one another, nor can the Board find any such indication.

1.7 It is further noted that feature 1.4 of claim 1 defines a region having the elastic film stretchable structure to include a stretchable region and a non-stretchable region. The stretchable and non-stretchable regions are thus disclosed to be structurally linked at least insofar as they are both part of a common region having the elastic film stretchable structure. Omission of the elongation at an elastic limit of the stretchable region from claim 1 thus also lacks basis for this reason.

1.8 In summary, therefore, in view of all the points above, there is no disclosure in the application as filed of an elongation at an elastic limit of the non-stretchable region in isolation from an elongation at an elastic limit of the stretchable region. For at least this reason, the subject-matter of claim 1 thus extends beyond the content of the application as filed.

1.9 Consequently the ground for opposition under Article 100(c) EPC is prejudicial to the maintenance of the patent as granted.

2. *Auxiliary request 10**

Article 123(2) EPC

2.1 Despite having been raised by the appellant already with respect to claim 1 of the main request, the objection in relation to features 1.5 and 1.7 did not have to be decided upon for the main request due to the Board's finding regarding added subject-matter with respect to feature 1.8 (see point 1.8 above). With claim 1 of auxiliary request 10* having overcome the objection relating to feature 1.8, features 1.5 and 1.7 must now be considered for this request.

2.2 Relative to claim 1 as filed, claim 1 of auxiliary request 10* has *inter alia* been amended in feature 1.5 to recite that the stretchable region has 'the through holes'. It thus follows unambiguously from the linguistic structure of claim 1 that 'the through holes' recited in feature 1.7 refer to the same through holes as those claimed in feature 1.5, i.e. the through holes in the stretchable region.

2.3 The respondent's argument that it was clear from features 1.3 and 1.4 of claim 1 that the through holes were located both in the stretchable and the non-stretchable regions is not accepted. While feature 1.3 indeed defines through holes penetrating the elastic film of the elastic film stretchable structure at sheet bond portions and feature 1.4 recites that the elastic film stretchable structure includes both a stretchable region and a non-stretchable region, this does not allow a conclusion to be reached that the through holes are necessarily located in both the stretchable and the non-stretchable regions. While such a possibility is not excluded, the claim is broader than this and

encompasses the through holes being located in just the stretchable region, just the non-stretchable region, or even in neither of these regions.

2.4 As a consequence of the breadth of the claim being much broader than held by the respondent, its argument that the amended feature 1.5 addressed the through holes in the stretchable region whilst feature 1.7 necessarily addressed those in the non-stretchable region is not accepted. Again, the respondent's contention is a possibility not excluded by the claim, but it is not the sole possibility. Indeed, feature 1.5 unambiguously defines the presence of the through holes in the stretchable region, but feature 1.7 does not define the through holes additionally being present in the non-stretchable region (see point 2.2 above).

2.5 Such a linguistically clear interpretation of features 1.5 and 1.7 also makes technical sense to the skilled person.

2.5.1 Firstly, in this regard, it is noted that claim 1 defines the relationship between the stretchable region and the non-stretchable region of the elastic film stretchable structure in very broad terms; the non-stretchable region is merely defined to be located 'at least at one side of the stretchable region in a stretching and contracting direction'. No relative sizes of the two regions are defined, nor is any indication given of how many of each region there might be, simply 'a' stretchable region and 'a' non-stretchable region being claimed.

2.5.2 Secondly, it is noted that feature 1.7, rather than being drafted in terms of concrete physical features, defines the absence of linear continuity in the non-

stretchable region as being 'due to presence of the through holes'. Precisely how this condition is achieved is left open by the claim but, as a consequence of the chosen wording of feature 1.7 effectively claiming a result to be achieved, the through holes in the stretchable region would not unreasonably be interpreted by the skilled person as having an influence on the ability for the non-stretchable region to have no section in which the elastic film linearly continues along the stretching and contracting direction. The respondent's contention that this was a non-sensical interpretation of the claim is not accepted. As already explained above, claim 1 does not unambiguously define what the respondent wishes the reader to understand. Rather the claim has been drafted more broadly which allows the technically reasonable interpretation that the through holes in the stretchable region result in the lack of a section in the non-stretchable region in which the elastic film linearly continues along the stretching and contracting direction.

2.5.3 The breadth of claim resulting from at least the above two factors would thus allow the skilled person to technically reasonably understand features 1.5 and 1.7 of claim 1 in precisely the manner that the wording of claim 1 defines.

2.5.4 With the skilled person being able to technically understand claim 1 based on the wording of the claim alone, the respondent's reference to Figs. 9 and 11 and paragraphs [0100] to [0102] of the application as filed, in order to interpret claim 1 in a more limited way by considering features which are not present in the claim, is not appropriate. This would be against the established principle according to which features

which are only present in the description and not in the claim cannot be read into a patent claim to limit its subject-matter.

2.6 Claim 1 as amended, through the addition of 'the through holes' in feature 1.5, thus defines in feature 1.7 that, due to the presence of the through holes (in the stretchable region), the non-stretchable region does not have a section in which the elastic film linearly continues along the stretching and contracting direction. This lacks basis in the application as filed. The respondent did not contest this conclusion.

2.7 Consequently the subject-matter of claim 1 does not meet the requirement of Article 123(2) EPC. Thus, irrespective of any issue regarding admittance, auxiliary request 10* is not allowable.

3. *Auxiliary requests 10A to 10I*

Article 13(2) RPBA

3.1 According to Article 13(2) RPBA, any amendment to a party's appeal case made after notification of a communication under Article 15, paragraph 1, shall, in principle, not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.

Auxiliary requests 10A to 10I were indeed filed by the respondent after notification of the Board's communication under Article 15(1) RPBA, so the conditions of Article 13(2) RPBA apply to these requests.

3.2 *Auxiliary request 10A*

The respondent's argument that point 1.1.2 of the Board's communication under Article 15(1) RPBA introduced a new interpretation of the presence or not of through holes in the non-stretchable region, which had not been raised by either party, is not accepted. In point 1.1.2, the Board concludes that 'there seems to be no definition of the through holes being present in the non-stretchable region'. This is precisely the appellant's contention in the first five paragraphs on page 5 of its grounds of appeal i.e. that the through holes recited in feature 1.7 of claim 1 are those through holes recited in feature 1.5. It thus follows that, in its preliminary opinion, the Board simply agreed with the appellant's arguments on this issue and did not introduce a new interpretation of claim 1. Consequently no exceptional circumstances existed justifying auxiliary request 10A being taken into account.

3.3 *Auxiliary request 10B*

3.3.1 The respondent's argument that, contrary to both parties, the Board had found D1 to disclose feature 1.4 and that this presented an exceptional circumstance justifying admittance of auxiliary request 10B is also not accepted.

3.3.2 While the Board's preliminary opinion addressed the issue of novelty of the subject-matter of claim 1 of the main request over D1, the eventual decision on all higher ranking requests to auxiliary request 10B has been based on objections of added subject-matter. It thus follows that no causality exists between the newly raised aspect (i.e. how the Board interpreted D1 with

respect to the disclosure of feature 1.4) and the final conclusion of the Board regarding the main request or auxiliary requests 10* and 10A. The newly raised aspect can thus not qualify as an exceptional circumstance according to Article 13(2) RPBA.

3.3.3 As similarly found in T 2352/19, Reasons 2.5.2, the mere fact that the filing of the respondent's request was triggered by the Board's preliminary opinion, i.e. that the raising of the new aspect was causal for the filing of the request, does not necessarily result in this request being taken into account. The request might well have been submitted as a legitimate attempt to address the newly raised aspect but the legitimacy of the attempt ceases to exist if the newly raised aspect does not become relevant for the decision.

3.3.4 Consequently, no exceptional circumstances justified auxiliary request 10B being taken into account.

3.4 *Auxiliary requests 10C to 10I*

3.4.1 The subject-matter of claim 1 of each of these lower ranking auxiliary requests is based on claim 1 of auxiliary request 10A and/or 10B in combination with features taken from dependent claims. The respondent gave no exceptional circumstances justifying their being taken into account going beyond those presented for auxiliary requests 10A and 10B.

3.4.2 Absent any exceptional circumstances justifying the admittance of auxiliary requests 10C to 10I, the Board exercised its discretion not to take these auxiliary requests into account.

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:

D. Grundner P. Cipriano

Decision electronically authenticated

Auxiliary request 10*

1. An absorbent article having an absorber that absorbs excrement, the absorbent article comprising

an elastic film stretchable structure (20X) in which an elastic film (30) is stacked between a first sheet layer (20A) and a second sheet layer (20B), and the first sheet layer (20A) and the second sheet layer (20B) are joined via through holes (31) penetrating the elastic film (30) at a large number of sheet bond portions (40) arranged at intervals, wherein

a region having the elastic film stretchable structure (20X) includes a stretchable region (80) stretchable in one direction and a non-stretchable region (70) provided at least at one side of the stretchable region (80) in a stretching and contracting direction,

the stretchable region has the through holes (31) and a section in which the elastic film (30) linearly continues along the stretching and contracting direction,

the stretchable region (80) is contracted in the stretching and contracting direction by a contraction force of the elastic film (30) while it is possible that the stretchable region (80) is stretched in the stretching and contracting direction,

the non-stretchable region (70), due to presence of the through holes (31), does not have a section in which the elastic

film (30) linearly continues along the stretching and contracting direction, even though the elastic film (30) of the non-stretchable region (70) continues in the stretching and contracting direction, ~~and~~

in the non-stretchable region (70), an elongation at an elastic limit in the stretching and contracting direction is set to 120% or less, and

in the stretchable region (80), an elongation at an elastic limit in the stretching and contracting direction is set to 200% or more.

Auxiliary request 10A

1. An absorbent article having an absorber that absorbs excrement, the absorbent article comprising

an elastic film stretchable structure (20X) in which an elastic film (30) is stacked between a first sheet layer (20A) and a second sheet layer (20B), and the first sheet layer (20A) and the second sheet layer (20B) are joined via through holes (31) penetrating the elastic film (30) at a large number of sheet bond portions (40) arranged at intervals, wherein

a region having the elastic film stretchable structure (20X) includes a stretchable region (80) stretchable in one direction and a non-stretchable region (70) provided at least at one side of the stretchable region (80) in a stretching and contracting direction,

the stretchable region has the through holes (31) and a section in which the elastic film (30) linearly continues along the stretching and contracting direction,

the stretchable region (80) is contracted in the stretching and contracting direction by a contraction force of the elastic film (30) while it is possible that the stretchable region (80) is stretched in the stretching and contracting direction,

the non-stretchable region (70) has the through holes (31) and, due to presence of the through holes (31), does not have

a section in which the elastic film (30) linearly continues along the stretching and contracting direction, even though the elastic film (30) of the non-stretchable region (70) continues in the stretching and contracting direction,

in the non-stretchable region (70), an elongation at an elastic limit in the stretching and contracting direction is set to 120% or less, and

in the stretchable region (80), an elongation at an elastic limit in the stretching and contracting direction is set to 200% or more.

Auxiliary request 10B

1. An absorbent article having an absorber that absorbs excrement, the absorbent article comprising

an elastic film stretchable structure (20X) in which an elastic film (30) is stacked between a first sheet layer (20A) and a second sheet layer (20B), and the first sheet layer (20A) and the second sheet layer (20B) are joined via through holes (31) penetrating the elastic film (30) at a large number of sheet bond portions (40) arranged at intervals, wherein

a region having the elastic film stretchable structure (20X) includes a stretchable region (80) having the elastic film stretchable structure (20X) and being stretchable in one direction and a non-stretchable region (70) having the elastic film stretchable structure (20X) and being provided at least at one side of the stretchable region (80) in a stretching and contracting direction,

the stretchable region has the through holes (31) and a section in which the elastic film (30) linearly continues along the stretching and contracting direction,

the stretchable region (80) is contracted in the stretching and contracting direction by a contraction force of the elastic film (30) while it is possible that the stretchable region (80) is stretched in the stretching and contracting direction,

the non-stretchable region (70), due to presence of the through holes (31), does not have a section in which the elastic film (30) linearly continues along the stretching and contracting direction, even though the elastic film (30) of the non-stretchable region (70) continues in the stretching and contracting direction,

in the non-stretchable region (70), an elongation at an elastic limit in the stretching and contracting direction is set to 120% or less, and

in the stretchable region (80), an elongation at an elastic limit in the stretching and contracting direction is set to 200% or more.

Auxiliary request 10C

1. An absorbent article having an absorber that absorbs excrement, the absorbent article comprising

an elastic film stretchable structure (20X) in which an elastic film (30) is stacked between a first sheet layer (20A) and a second sheet layer (20B), and the first sheet layer (20A) and the second sheet layer (20B) are joined via through holes (31) penetrating the elastic film (30) at a large number of sheet bond portions (40) arranged at intervals, wherein

a region having the elastic film stretchable structure (20X) includes a stretchable region (80) having the elastic film stretchable structure (20X) and being stretchable in one direction and a non-stretchable region (70) provided at least at one side of the stretchable region (80) having the elastic film stretchable structure (20X) and being in a stretching and contracting direction,

the stretchable region has the through holes (31) and a section in which the elastic film (30) linearly continues along the stretching and contracting direction,

the stretchable region (80) is contracted in the stretching and contracting direction by a contraction force of the elastic film (30) while it is possible that the stretchable region (80) is stretched in the stretching and contracting direction,

the non-stretchable region (70) has the through holes (31) and, due to presence of the through holes (31), does not have a section in which the elastic film (30) linearly continues along the stretching and contracting direction, even though the elastic film (30) of the non-stretchable region (70) continues in the stretching and contracting direction,

in the non-stretchable region (70), an elongation at an elastic limit in the stretching and contracting direction is set to 120% or less, and

in the stretchable region (80), an elongation at an elastic limit in the stretching and contracting direction is set to 200% or more.

Auxiliary request 10D

1. An absorbent article having an absorber that absorbs excrement, the absorbent article comprising

an elastic film stretchable structure (20X) in which an elastic film (30) is stacked between a first sheet layer (20A) and a second sheet layer (20B), and the first sheet layer (20A) and the second sheet layer (20B) are joined via through holes (31) penetrating the elastic film (30) at a large number of sheet bond portions (40) arranged at intervals, wherein

a region having the elastic film stretchable structure (20X) includes a stretchable region (80) stretchable in one direction and a non-stretchable region (70) provided at least at one side of the stretchable region (80) in a stretching and contracting direction,

the stretchable region has the through holes (31) and a section in which the elastic film (30) linearly continues along the stretching and contracting direction,

the stretchable region (80) is contracted in the stretching and contracting direction by a contraction force of the elastic film (30) while it is possible that the stretchable region (80) is stretched in the stretching and contracting direction,

the non-stretchable region (70) has the through holes (31) and, due to presence of the through holes (31), does not have

a section in which the elastic film (30) linearly continues along the stretching and contracting direction, even though the elastic film (30) of the non-stretchable region (70) continues in the stretching and contracting direction,

in the non-stretchable region (70), an elongation at an elastic limit in the stretching and contracting direction is set to 120% or less, and

in the stretchable region (80), an elongation at an elastic limit in the stretching and contracting direction is set to 200% or more, wherein

across the whole non-stretchable region (70), the through holes (31) penetrating the elastic film (30) are disposed in a staggered shape,

a projection of a center-to-center interval (31f) of the adjacent two through holes (31) in the stretching and contracting direction is shorter than a length of each of the through holes (31) in the stretching and contracting direction, and

a projection of a center-to-center interval (31e) of the adjacent two through holes (31) in a direction orthogonal to the stretching and contracting direction is shorter than a length of each of the through holes (31) in the direction orthogonal to the stretching and contracting direction, and wherein

in the non-stretchable region (70), the first sheet layer (20A) is not and the second sheet layer (20B) is not joined to the elastic film (30) in a portion other than between the first

sheet layer (20A) and the second sheet layer (20B) in the sheet bond portions, and in a natural length state, a gap is provided, which is generated so as to contain both side portions of each of the sheet bond portions in the stretching and contracting direction by a peripheral edge of each of the through holes (31) of the elastic film (30) and each of the sheet bond portions (40)separated from each other.

Auxiliary request 10E

1. An absorbent article having an absorber that absorbs excrement, the absorbent article comprising

an elastic film stretchable structure (20X) in which an elastic film (30) is stacked between a first sheet layer (20A) and a second sheet layer (20B), and the first sheet layer (20A) and the second sheet layer (20B) are joined via through holes (31) penetrating the elastic film (30) at a large number of sheet bond portions (40) arranged at intervals, wherein

a region having the elastic film stretchable structure (20X) includes a stretchable region (80) having the elastic film stretchable structure (20X) and being stretchable in one direction and a non-stretchable region (70) having the elastic film stretchable structure (20X) and being provided at least at one side of the stretchable region (80) in a stretching and contracting direction,

the stretchable region has the through holes (31) and a section in which the elastic film (30) linearly continues along the stretching and contracting direction,

the stretchable region (80) is contracted in the stretching and contracting direction by a contraction force of the elastic film (30) while it is possible that the stretchable region (80) is stretched in the stretching and contracting direction,

the non-stretchable region (70), due to presence of the through holes (31), does not have a section in which the elastic film (30) linearly continues along the stretching and contracting direction, even though the elastic film (30) of the non-stretchable region (70) continues in the stretching and contracting direction,

in the non-stretchable region (70), an elongation at an elastic limit in the stretching and contracting direction is set to 120% or less, and

in the stretchable region (80), an elongation at an elastic limit in the stretching and contracting direction is set to 200% or more, wherein

across the whole non-stretchable region (70), the through holes (31) penetrating the elastic film (30) are disposed in a staggered shape,

a projection of a center-to-center interval (31f) of the adjacent two through holes (31) in the stretching and contracting direction is shorter than a length of each of the through holes (31) in the stretching and contracting direction, and

a projection of a center-to-center interval (31e) of the adjacent two through holes (31) in a direction orthogonal to the stretching and contracting direction is shorter than a length of each of the through holes (31) in the direction orthogonal to the stretching and contracting direction, wherein

in the non-stretchable region (70), the first sheet layer

(20A) is not and the second sheet layer (20B) is not joined to the elastic film (30) in a portion other than between the first sheet layer (20A) and the second sheet layer (20B) in the sheet bond portions, and in a natural length state, a gap is provided, which is generated so as to contain both side portions of each of the sheet bond portions in the stretching and contracting direction by a peripheral edge of each of the through holes (31) of the elastic film (30) and each of the sheet bond portions (40)separated from each other.

Auxiliary request 10F

1. An absorbent article having an absorber that absorbs excrement, the absorbent article comprising

an elastic film stretchable structure (20X) in which an elastic film (30) is stacked between a first sheet layer (20A) and a second sheet layer (20B), and the first sheet layer (20A) and the second sheet layer (20B) are joined via through holes (31) penetrating the elastic film (30) at a large number of sheet bond portions (40) arranged at intervals, wherein

a region having the elastic film stretchable structure (20X) includes a stretchable region (80) having the elastic film stretchable structure (20X) and being stretchable in one direction and a non-stretchable region (70) provided at least at one side of the stretchable region (80) having the elastic film stretchable structure (20X) and being in a stretching and contracting direction,

the stretchable region has the through holes (31) and a section in which the elastic film (30) linearly continues along the stretching and contracting direction,

the stretchable region (80) is contracted in the stretching and contracting direction by a contraction force of the elastic film (30) while it is possible that the stretchable region (80) is stretched in the stretching and contracting direction,

the non-stretchable region (70) has the through holes (31) and, due to presence of the through holes (31), does not have a section in which the elastic film (30) linearly continues along the stretching and contracting direction, even though the elastic film (30) of the non-stretchable region (70) continues in the stretching and contracting direction,

in the non-stretchable region (70), an elongation at an elastic limit in the stretching and contracting direction is set to 120% or less, and

in the stretchable region (80), an elongation at an elastic limit in the stretching and contracting direction is set to 200% or more, wherein

across the whole non-stretchable region (70), the through holes (31) penetrating the elastic film (30) are disposed in a staggered shape,

a projection of a center-to-center interval (31f) of the adjacent two through holes (31) in the stretching and contracting direction is shorter than a length of each of the through holes (31) in the stretching and contracting direction, and

a projection of a center-to-center interval (31e) of the adjacent two through holes (31) in a direction orthogonal to the stretching and contracting direction is shorter than a length of each of the through holes (31) in the direction orthogonal to the stretching and contracting direction, wherein

in the non-stretchable region (70), the first sheet layer

(20A) is not and the second sheet layer (20B) is not joined to the elastic film (30) in a portion other than between the first sheet layer (20A) and the second sheet layer (20B) in the sheet bond portions, and in a natural length state, a gap is provided, which is generated so as to contain both side portions of each of the sheet bond portions in the stretching and contracting direction by a peripheral edge of each of the through holes (31) of the elastic film (30) and each of the sheet bond portions (40)separated from each other.

Auxiliary request 10G

1. An absorbent article having an absorber that absorbs excrement, the absorbent article comprising

an elastic film stretchable structure (20X) in which an elastic film (30) is stacked between a first sheet layer (20A) and a second sheet layer (20B), and the first sheet layer (20A) and the second sheet layer (20B) are joined via through holes (31) penetrating the elastic film (30) at a large number of sheet bond portions (40) arranged at intervals, wherein

a region having the elastic film stretchable structure (20X) includes a stretchable region (80) stretchable in one direction and a non-stretchable region (70) provided at least at one side of the stretchable region (80) in a stretching and contracting direction,

the stretchable region has the through holes (31) and a section in which the elastic film (30) linearly continues along the stretching and contracting direction,

the stretchable region (80) is contracted in the stretching and contracting direction by a contraction force of the elastic film (30) while it is possible that the stretchable region (80) is stretched in the stretching and contracting direction,

the non-stretchable region (70) has the through holes (31) and, due to presence of the through holes (31), does not have

a section in which the elastic film (30) linearly continues along the stretching and contracting direction, even though the elastic film (30) of the non-stretchable region (70) continues in the stretching and contracting direction,

in the non-stretchable region (70), an elongation at an elastic limit in the stretching and contracting direction is set to 120% or less, and

in the stretchable region (80), an elongation at an elastic limit in the stretching and contracting direction is set to 200% or more, wherein

across the whole non-stretchable region (70), the through holes (31) penetrating the elastic film (30) are disposed in a staggered shape,

a projection of a center-to-center interval (31f) of the adjacent two through holes (31) in the stretching and contracting direction is shorter than a length of each of the through holes (31) in the stretching and contracting direction, and

a projection of a center-to-center interval (31e) of the adjacent two through holes (31) in a direction orthogonal to the stretching and contracting direction is shorter than a length of each of the through holes (31) in the direction orthogonal to the stretching and contracting direction, wherein

a stretching stress of the elastic film (30) is in a range of 4 to 12 N/35 mm when the elastic film (30) is stretched four times in the stretching and contracting direction, and

in a state in which the non-stretchable region (70) is stretched to an elastic limit in the stretching and contracting direction, the projection of a center-to-center interval (31e) of the adjacent two through holes (31) in the direction orthogonal to the stretching and contracting direction is in a range of 0.4 to 2.7 mm, the length (31y) of the through holes (31) in the direction orthogonal to the stretching and contracting direction is in a range of 0.5 to 3.0 mm, the projection of a center-to-center interval (31f) of the adjacent two through holes (31) in the stretching and contracting direction is 0.5 to 2 times the length (31y) of the through holes (31) in the direction orthogonal to the stretching and contracting direction, and the length (31x) of the through holes (31) in the stretching and contracting direction is 1.1 to 1.8 times the projection of a center-to-center interval (31e) of the adjacent two through holes in the direction orthogonal to the stretching and contracting direction, and the center-to-center interval (31f) of the adjacent two through holes (31) in the width direction is equal to a center-to-center interval (40f) of the adjacent two sheet bond portions (40) in the width direction, the center-to-center interval (31e) of the adjacent two through holes (31) in the front-back direction is equal to a center-to-center interval (40e) of the adjacent two sheet bond portions (40) in the front-back direction, and the length (31y) of the through holes (31) in the front-back direction is equal to the length (40y)

of the sheet bond portions (40) in the front-back direction, and wherein

in the non-stretchable region (70), the first sheet layer (20A) is not and the second sheet layer (20B) is not joined to the elastic film (30) in a portion other than between the first sheet layer (20A) and the second sheet layer (20B) in the sheet bond portions, and in a natural length state, a gap is provided, which is generated so as to contain both side portions of each of the sheet bond portions in the stretching and contracting direction by a peripheral edge of each of the through holes (31) of the elastic film (30) and each of the sheet bond portions (40)separated from each other.

Auxiliary request 10H

1. An absorbent article having an absorber that absorbs excrement, the absorbent article comprising

an elastic film stretchable structure (20X) in which an elastic film (30) is stacked between a first sheet layer (20A) and a second sheet layer (20B), and the first sheet layer (20A) and the second sheet layer (20B) are joined via through holes (31) penetrating the elastic film (30) at a large number of sheet bond portions (40) arranged at intervals, wherein

a region having the elastic film stretchable structure (20X) includes a stretchable region (80) having the elastic film stretchable structure (20X) and being stretchable in one direction and a non-stretchable region (70) having the elastic film stretchable structure (20X) and being provided at least at one side of the stretchable region (80) in a stretching and contracting direction,

the stretchable region has the through holes (31) and a section in which the elastic film (30) linearly continues along the stretching and contracting direction,

the stretchable region (80) is contracted in the stretching and contracting direction by a contraction force of the elastic film (30) while it is possible that the stretchable region (80) is stretched in the stretching and contracting direction,

the non-stretchable region (70), due to presence of the through holes (31), does not have a section in which the elastic film (30) linearly continues along the stretching and contracting direction, even though the elastic film (30) of the non-stretchable region (70) continues in the stretching and contracting direction,

in the non-stretchable region (70), an elongation at an elastic limit in the stretching and contracting direction is set to 120% or less, and

in the stretchable region (80), an elongation at an elastic limit in the stretching and contracting direction is set to 200% or more, wherein

across the whole non-stretchable region (70), the through holes (31) penetrating the elastic film (30) are disposed in a staggered shape,

a projection of a center-to-center interval (31f) of the adjacent two through holes (31) in the stretching and contracting direction is shorter than a length of each of the through holes (31) in the stretching and contracting direction, and

a projection of a center-to-center interval (31e) of the adjacent two through holes (31) in a direction orthogonal to the stretching and contracting direction is shorter than a length of each of the through holes (31) in the direction orthogonal to the stretching and contracting direction, wherein

a stretching stress of the elastic film (30) is in a range

of 4 to 12 N/35 mm when the elastic film (30) is stretched four times in the stretching and contracting direction, and

in a state in which the non-stretchable region (70) is stretched to an elastic limit in the stretching and contracting direction, the projection of a center-to-center interval (31e) of the adjacent two through holes (31) in the direction orthogonal to the stretching and contracting direction is in a range of 0.4 to 2.7 mm, the length (31y) of the through holes (31) in the direction orthogonal to the stretching and contracting direction is in a range of 0.5 to 3.0 mm, the projection of a center-to-center interval (31f) of the adjacent two through holes (31) in the stretching and contracting direction is 0.5 to 2 times the length (31y) of the through holes (31) in the direction orthogonal to the stretching and contracting direction, and the length (31x) of the through holes (31) in the stretching and contracting direction is 1.1 to 1.8 times the projection of a center-to-center interval (31e) of the adjacent two through holes in the direction orthogonal to the stretching and contracting direction, and the center-to-center interval (31f) of the adjacent two through holes (31) in the width direction is equal to a center-to-center interval (40f) of the adjacent two sheet bond portions (40) in the width direction, the center-to-center interval (31e) of the adjacent two through holes (31) in the front-back direction is equal to a center-to-center interval (40e) of the adjacent two sheet bond portions (40) in the

front-back direction, and the length (31y) of the through holes (31) in the front-back direction is equal to the length (40y) of the sheet bond portions (40) in the front-back direction, and wherein

in the non-stretchable region (70), the first sheet layer (20A) is not and the second sheet layer (20B) is not joined to the elastic film (30) in a portion other than between the first sheet layer (20A) and the second sheet layer (20B) in the sheet bond portions, and in a natural length state, a gap is provided, which is generated so as to contain both side portions of each of the sheet bond portions in the stretching and contracting direction by a peripheral edge of each of the through holes (31) of the elastic film (30) and each of the sheet bond portions (40)separated from each other.

Auxiliary request 10I

1. An absorbent article having an absorber that absorbs excrement, the absorbent article comprising

an elastic film stretchable structure (20X) in which an elastic film (30) is stacked between a first sheet layer (20A) and a second sheet layer (20B), and the first sheet layer (20A) and the second sheet layer (20B) are joined via through holes (31) penetrating the elastic film (30) at a large number of sheet bond portions (40) arranged at intervals, wherein

a region having the elastic film stretchable structure (20X) includes a stretchable region (80) having the elastic film stretchable structure (20X) and being stretchable in one direction and a non-stretchable region (70) provided at least at one side of the stretchable region (80) having the elastic film stretchable structure (20X) and being in a stretching and contracting direction,

the stretchable region has the through holes (31) and a section in which the elastic film (30) linearly continues along the stretching and contracting direction,

the stretchable region (80) is contracted in the stretching and contracting direction by a contraction force of the elastic film (30) while it is possible that the stretchable region (80) is stretched in the stretching and contracting direction,

the non-stretchable region (70) has the through holes (31) and, due to presence of the through holes (31), does not have a section in which the elastic film (30) linearly continues along the stretching and contracting direction, even though the elastic film (30) of the non-stretchable region (70) continues in the stretching and contracting direction,

in the non-stretchable region (70), an elongation at an elastic limit in the stretching and contracting direction is set to 120% or less, and

in the stretchable region (80), an elongation at an elastic limit in the stretching and contracting direction is set to 200% or more, wherein

across the whole non-stretchable region (70), the through holes (31) penetrating the elastic film (30) are disposed in a staggered shape,

a projection of a center-to-center interval (31f) of the adjacent two through holes (31) in the stretching and contracting direction is shorter than a length of each of the through holes (31) in the stretching and contracting direction, and

a projection of a center-to-center interval (31e) of the adjacent two through holes (31) in a direction orthogonal to the stretching and contracting direction is shorter than a length of each of the through holes (31) in the direction orthogonal to the stretching and contracting direction, wherein

a stretching stress of the elastic film (30) is in a range

of 4 to 12 N/35 mm when the elastic film (30) is stretched four times in the stretching and contracting direction, and

in a state in which the non-stretchable region (70) is stretched to an elastic limit in the stretching and contracting direction, the projection of a center-to-center interval (31e) of the adjacent two through holes (31) in the direction orthogonal to the stretching and contracting direction is in a range of 0.4 to 2.7 mm, the length (31y) of the through holes (31) in the direction orthogonal to the stretching and contracting direction is in a range of 0.5 to 3.0 mm, the projection of a center-to-center interval (31f) of the adjacent two through holes (31) in the stretching and contracting direction is 0.5 to 2 times the length (31y) of the through holes (31) in the direction orthogonal to the stretching and contracting direction, and the length (31x) of the through holes (31) in the stretching and contracting direction is 1.1 to 1.8 times the projection of a center-to-center interval (31e) of the adjacent two through holes in the direction orthogonal to the stretching and contracting direction, and the center-to-center interval (31f) of the adjacent two through holes (31) in the width direction is equal to a center-to-center interval (40f) of the adjacent two sheet bond portions (40) in the width direction, the center-to-center interval (31e) of the adjacent two through holes (31) in the front-back direction is equal to a center-to-center interval (40e) of the adjacent two sheet bond portions (40) in the

front-back direction, and the length (31y) of the through holes (31) in the front-back direction is equal to the length (40y) of the sheet bond portions (40) in the front-back direction,, and wherein

in the non-stretchable region (70), the first sheet layer (20A) is not and the second sheet layer (20B) is not joined to the elastic film (30) in a portion other than between the first sheet layer (20A) and the second sheet layer (20B) in the sheet bond portions, and in a natural length state, a gap is provided, which is generated so as to contain both side portions of each of the sheet bond portions in the stretching and contracting direction by a peripheral edge of each of the through holes (31) of the elastic film (30) and each of the sheet bond portions (40)separated from each other.