UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TORGNY FALK

Appeal 2008-3626
Application 10/397,268
U.S. Patent Publication 2003/0219573
Technology Center 1700

Decided: September 2, 2008

Before: FRED E. McKELVEY, *Senior Administrative Patent Judge*, and ROMULO H. DELMENDO and SALLY GARDNER LANE, *Administrative Patent Judges*.

McKELVEY, *Senior Administrative Patent Judge*.

DECISION ON APPEAL

A. Statement of the case

SCA Hygiene Products AB ("SCA"), the real party in interest, appeals (35 U.S.C. § 134(a)) a final rejection of claims 1-21 as being unpatentable under 35 U.S.C. § 103(a) over Gustafsson, U.S. Patent 5,728,082. Gustafsson is prior art under 35 U.S.C. § 102(b). We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

B. Issues

The principal issue is whether SCA has sustained its burden of showing that the Examiner erred in rejecting claims 1-21 as being unpatentable under 35 U.S.C. § 103(a) over Gustafsson.

SCA argues the claims as a group, except for claim 8. Accordingly, we consider claims 1 and 8.

C. Findings of fact

The following findings of fact are believed to be supported by a preponderance of the evidence. To the extent that a finding of fact is a conclusion of law, it may be treated as such. Additional findings may appear in the Analysis portion of the opinion.

The invention

1. The invention relates to absorbent products, such as a panty liner, a sanitary towel or incontinence protection using superabsorbent polymers. Specification, ¶ 0002 [references to the specification are to the specification as published].

2. Materials made from superabsorbent polymers (SAP) have become popular for use in various absorbent products. Specification, ¶ 0003.

3. SAP materials have an ability to absorb liquid in an amount several times its own weight. Specification, ¶ 0003.

4. Typically, SAP is added to the remaining absorbent body in the form of polymer particles. Specification, ¶ 0004.

5. The particles are built up of superabsorbent polymer chains forming a network, which is held together by cross-linking. Specification, ¶ 0004.

6. In order to obtain cross-linking in the superabsorbent polymer, cross-linking agents are used. Specification, ¶ 0004.

7. The degree of cross-linking determines the absorbent properties of the material. Specification, ¶ 0006.

8. A higher degree of cross-linking results in a higher initial ability to absorb fluid. Specification, ¶ 0006.

9. A low degree of cross-linking gives a viscous, expandable material, which has the capacity to absorb a large volume of liquid. Specification, ¶ 0006.

10. At a higher cross-linking degree, total capacity to absorb decreases ("Modern Superabsorbent Polymer Technology", Buchholz and Graham, Wiley-VCH, 1998). Specification, ¶ 0006.

11. A balance between these two extremes is therefore desirable. Specification, ¶ 0006.

12. The fluids that must be absorbable by an absorbent product in the category of panty liners, sanitary towels or incontinence protections are primarily urine and blood-containing fluids, such as menstrual fluid. Specification, ¶ 0008.

13. Urine is a water-based solution, which among others comprises various salts. Specification, ¶ 0008.

14. Blood has a higher viscosity than urine. Specification, ¶ 0008.

15. SCA tells us that a number of technical solutions for absorption of blood and urine in the technical area exist. Specification, ¶ 0014.

16. According to SCA, however, a problem not yet solved is to absorb blood and urine in the same absorbent body. Specification, ¶ 0014.

17. Thus, SCA reasons that there is a need for an absorbent body, which body is constituted in a way that both blood and urine may be absorbed in such an effective way that the risk for leakage is minimized. Specification, ¶ 0014.

18. With the background of the invention as set forth above, SCA tells us that the object of the invention is to provide an absorbent product having an absorbent body, which body is constituted in such a way that both urine and blood-containing fluids is absorbed to a high extent. Specification, ¶ 0015.

Drawings

19. Fig 1is reproduced below:

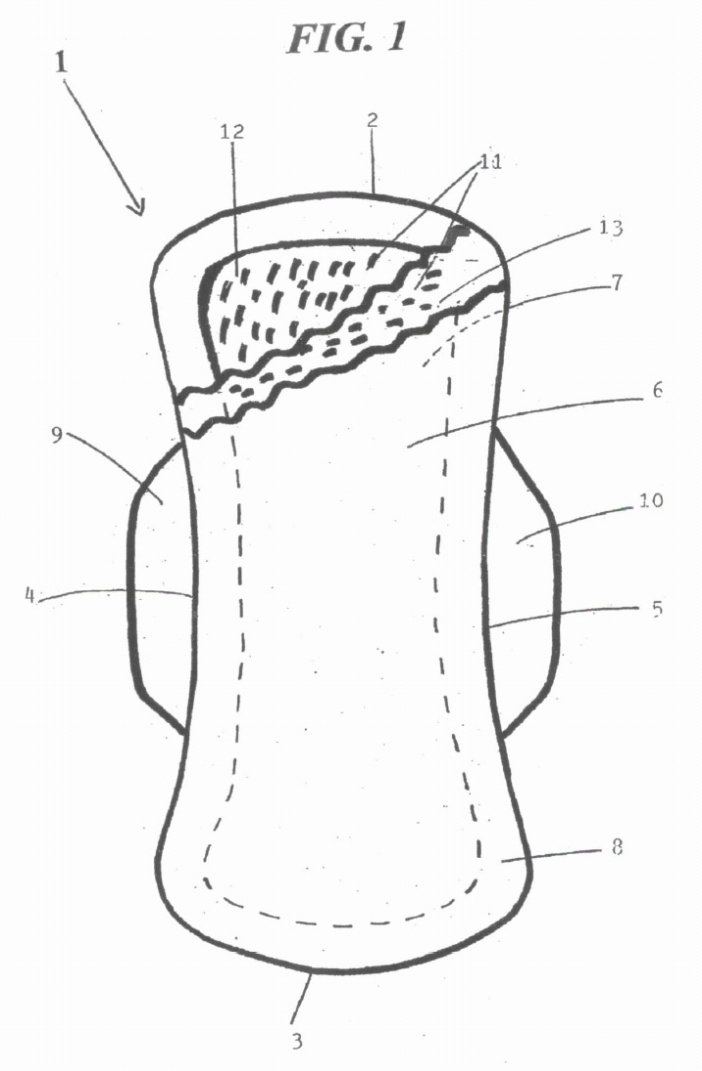

Fig. 1 depicts a panty liner according to one embodiment of the invention

Claims on appeal

20. Claim 1, which we reproduce from the claim appendix of the Appeal Brief, reads [drawing numbers, bracketed material, and some indentation added]:

> An absorbent product, for absorption of urine, blood, or menses, the absorbent product comprising:

a fluid permeable surface layer **6** facing the wearer during use;

a fluid impermeable backing layer **7** facing away from the wearer during use;

and

an absorbent body **11**, positioned between the surface layer **6** and the backing layer **7**, the absorbent body comprising:

superabsorbent polymer material, wherein the superabsorbent polymer material includes at least [1] a first superabsorbent polymer variant and [2] a second superabsorbent polymer variant,

the first superabsorbent polymer variant being a superabsorbent polymer with a cross-linking degree in an interval from 0.02 to 2.0 %, and

the second superabsorbent polymer variant being a superabsorbent polymer for absorption of blood with a cross-linking degree in an interval from 3.0 to 7.0 % and having a hydrophilic surface.

21. Claim 8, which is argued separately apart from claims 1-7 and 9-21, reads:

The absorbent product according to claim 7, wherein the superabsorbent polymer material of the upper layer is composed of the second superabsorbent polymer variant, and the superabsorbent polymer material in the lower layer is composed of the first superabsorbent polymer variant.

22. Since claim 8 depends indirectly from claim 1 through claim 7, we also reproduce claim 7:

> The absorbent product according to claim 1, wherein the absorbent body comprises an upper and a lower layer, and each of the first and second superabsorbent polymer variants are present in at least one of the upper layer and the lower layer.

Prior art

23. Gustafsson, like SCA, describes "an absorbent body or pad for use in diapers, incontinence guards, or like articles." Col. 1:11-12.

24. Fig. 5 and Fig. 6 are reproduced below.

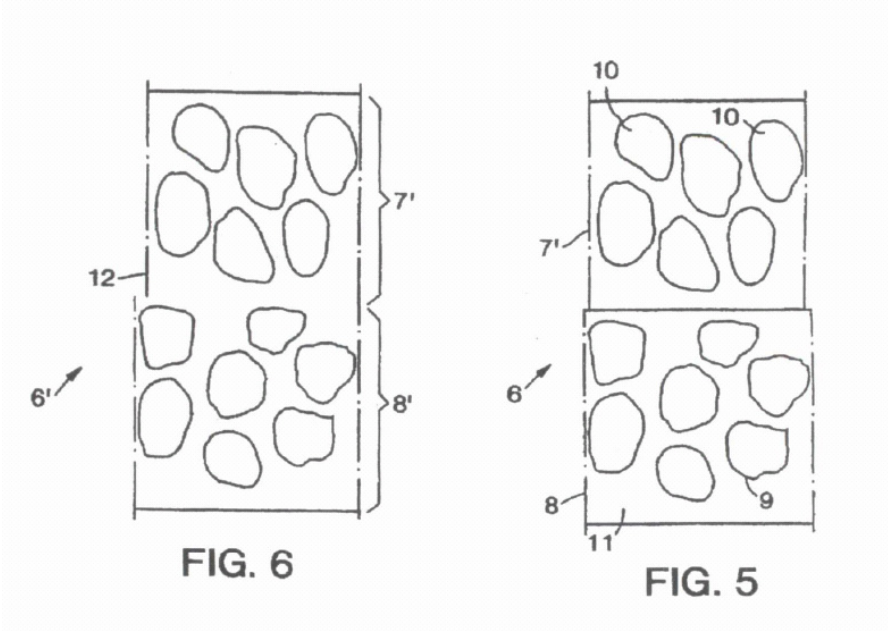

FIG. 6 FIG. 5

Figs. 5 and 6 depict embodiments of the Gustafsson invention

25. Gustafsson has the following to say about the pad (col. 3:19-46):

> An inventive absorbent pad **6** (FIG. 5) is constructed from an upper layer **7** . . . laying nearest the user when the absorbent pad is used in a diaper, and a bottom layer **8** which

> includes a superabsorbent **9** whose liquid absorbency is greater than the absorbency of the superabsorbent **10** of the upper layer.
>
> The bottom layer of the inventive absorbent pad may, for instance, be constructed … [of] superabsorbent **9** … mixed in a fluff **1** [shown in Fig. 1 which is not reproduced].
>
> The superabsorbent **9** in the bottom layer **8** may optionally comprise a superabsorbent having a gel strength which is so low as to form a continuous gel. The important criterion in this respect is that the upper layer is able to repeatedly absorb liquid quickly.
>
> One example of a gel which exhibits a very high gel strength and which functions effectively in the upper layer of the inventive absorbent pad is "SALSORB" DPX5038.
>
> Good results [are said to] have been achieved with "AQUALIC" CA W-2 in an upper fluff layer and while using the similarly cross-linked superabsorbent "AQUALIC" CA W-4 in the bottom layer. According to the manufacturer, "AQUALIC" CA W-2 has a higher degree of cross-linking and therewith greater gel strength than "AQUALIC" CA W-4.
>
> All of the superabsorbents mentioned by way of example are cross-linked sodium polyacrylates.

Differences between claims 1 and 8 vis-à-vis Gustafsson

26. The difference between the subject matter of claims 1 and 8, on the one hand, and Gustafsson, on the other hand, is that Gustafsson does not

explicitly describe the cross-linking degree intervals (0.02 to 2.0% and 3.0 to 7.0%) recited in claim 1.

Rebuttal evidence

27. According to SCA, the specification contains the following "rebuttal" evidence (¶ 0028) [bracketed matter added]:

> In a first embodiment of the invention the absorbent body comprises two different SAP-materials, whereby the first variant has a cross-linking degree in the interval from 0.02 to 2.0%, and the other variant has a cross-linking degree in the interval from 3.0 to 7.0%. Hereafter, the term "the first SAP-variant" refers to the SAP-variant having a low degree of cross-linking, and "the second SAP-variant" refers to the SAP-variant having a high degree of cross-linking. Thus, the first variant is a conventional SAP-material, having a high swell-capacity, and thereby suitable for absorption of urine. The second variant can be, for example, the SAP-material disclosed in SE0103961-9 [a Swedish patent application] (filed Nov. 27, 2001), the entire content of which is incorporated herein in its entirety. This second variant is especially suitable for the absorption of blood-containing fluids due to its high degree of cross-linking and its hydrophilic surface. In this way, an absorbent core is provided having the ability to absorb both blood and urine. Preferably, the first AP-variant has a cross-linking degree in the interval from 0.1 to 1.0%, and the second variant has a cross-linking degree in the interval from 4.0 to 5.0%.

C. Analysis

While somewhat unusual, we start our analysis with a response to SCA's assertion (Appeal Brief, page 4) that Gustafsson does not suggest the absorption of blood or why one would "modify" the first or second layer of Gustafsson to absorb blood as well as urine.

Plainly overlooked by SCA is Gustafsson's explicit statement that the invention is directed, *inter alia*, to incontinence guards. Col. 1:12.

In the background of the invention, SCA tells us that fluids that must be absorbable by incontinence protectors are "primarily urine and blood." Specification, ¶ 0008.

If Gustafsson's invention is directed, *inter alia*, to incontinence guards and incontinence protectors are designed to absorb both blood and urine, then one skilled in the art would have manifestly appreciated that Gustafsson suggests absorption of both blood and urine. Moreover, as the Examiner so aptly put it, "absorbent articles are conventionally used to absorb blood and urine." Examiner's Answer, page 4.

The Examiner found that one skilled in the art, armed with Gustafsson and ordinary skill, would have found the molecular weight of the superabsorbent polymers to be used in the Gustafsson article to be a result-effective variable. SCA has failed to demonstrate that the Examiner's finding is in any way erroneous.

Any person skilled in the art, and perhaps any observant person whether skilled in this art or not, would have known that urine is less viscous than blood. A person skilled in this art have known that a superabsorbent polymer with a higher degree of cross-linking will absorb a more viscous

fluid more efficiently than a superabsorbent polymer with a lower degree of cross-linking. Specification, ¶ 0006, referring to Buchholz and Graham.

Given that Gustafsson seeks to absorb both blood and urine in the case of an incontinence guard, little imagination would have been needed by a person skilled in the art to figure out the necessary degree of cross-linking in one layer to absorb viscous blood and the necessary degree of cross-linking in another layer to absorb non-viscous urine.

The principal problem with SCA's case is that it attributes almost no skill to a person skilled in the art. The background of the invention demonstrates quite the contrary. A person skilled in this art is not the automaton which SCA would like it to be. *KSR International Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1742 (2007) ("A person of ordinary skill is also a person of ordinary creativity, not an automaton.")

SCA's allegation that the claimed cross-linking degrees are "critical" (Specification, ¶ 0028; Appeal Brief, page 5) is not supported by the evidence. An applicant attempting to establish an unexpected result must do so by clear and convincing evidence. *McClain v. Ortmayer*, 141 U.S. 419, 429 (1891) (conclusive evidence needed to establish new function); *In re Passal*, 426 F.2d 409, 412, 165 USPQ 702, 704 (CCPA 1970) (the clear and convincing evidence of unexpected properties required by the CCPA in *In re Lohr*, 317 F.2d 388, 392 (CCPA 1963) is lacking).

A review of the material in ¶ 0028 of the specification falls considerably short of a clear and convincing showing of unexpected results. *First*, SCA fails to tell us, and did not tell the Examiner, how the "evidence" describes a particular embodiment or how that embodiment is compared to a

prior art embodiment. Examiner's Answer, page 5. *Second*, the "data" talks in terms of ranges which does little to establish the "critical" nature of the ranges. *Id*. We find no cogent response in the Reply Brief to the Examiner's findings declining to accord much, if any, weight to the so-called "evidence" of ¶ 0028 of the specification. Accordingly, we have no basis to question the Examiner's determination concerning the weight to be given the evidence.

SCA tells us in the Reply Brief (pages 1-2) that the claimed invention combines the function of what has traditionally been two different absorbent products into one specifically configured absorbent product. If so, then the claimed invention amounts to nothing more than a combination of old elements, each performing its intended function, in a totally predictable way. That being the case, the claimed invention faces a considerable hurdle to overcome § 103. *KSR*, 127 S. Ct. at 1740; *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 60-62 (1969).

SCA singles out dependent claim 8 for separate consideration. The Examiner has provided a complete and adequate response to SCA's arguments concerning claim 8. Examiner's Answer, pages 6-7.

We have considered SCA's remaining arguments and find none that warrant reversal of the Examiner's rejection. *Cf. Hartman v. Nicholson*, 483 F.3d 1311, 1315 (Fed. Cir. 2007).

E. Decision

Upon consideration of the appeal, and for the reasons given herein, as well as those given by the Examiner, it is

ORDERED that the decision of the Examiner rejecting claims 1-21 over Gustafsson is *affirmed*.

FURTHER ORDERED that no time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2008).

AFFIRMED

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cc (via First Class mail)

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