

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

*Ex parte* YOSHIHISA KAWAKAMI,  
VIJAY RAJAGOPALAN, KIMIO UEDA,  
and EBRAHIM REZAI

---

Appeal 2008-2023  
Application 11/079,042  
Technology Center 3700

---

Decided: September 29, 2008

---

Before CHARLES F. WARREN, CATHERINE Q. TIMM, and  
JEFFREY T. SMITH, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

DECISION ON APPEAL

Applicants appeal to the Board from the decision of the Primary Examiner finally rejecting claims 1 through 13 in the Office Action mailed May 26, 2006. 35 U.S.C. §§ 6 and 134(a) (2002); 37 C.F.R. § 41.31(a) (2006).

We affirm the decision of the Primary Examiner.

Claim 1 illustrates Appellants' invention of a disposable absorbent article, and is representative of the claims on appeal:

1. A disposable absorbent article, comprising: a topsheet, a backsheet combined with the topsheet, a fluid storage layer disposed between the topsheet and backsheet and having a body-facing surface and a garment-facing surface opposing the body-facing surface, wherein said topsheet is positioned adjacent to said body-facing surface of said fluid storage layer, the fluid storage layer containing a superabsorbent material; an odor reduction layer disposed at the body-facing surface side of the fluid storage layer, the odor reduction layer containing a metalphthalocyanine material; and an isolation means disposed between the superabsorbent material and the odor reduction layer for isolating the metalphthalocyanine material from contacting at least a part of the superabsorbent material.

The Examiner relies upon the evidence in these references (Ans. 2-3):

Marcus	4,826,497	May 2, 1989
Hasebe	5,047,022	Sep. 10, 1991

Appellants request review of the ground of rejection of claims 1 through 13 under 35 U.S.C. § 103(a) as being unpatentable over Marcus in view of Hasebe. Ans. 3; Br. 3.

Appellants argue independent claims 1 and 13, with dependent claims 2 through 7 standing or falling therewith; dependent claim 8; and dependent claims 9 through 12. Br. 3, 6 and 7. Thus, we decide this appeal based on claims 1, 8, and claim 9. 37 C.F.R. § 41.37(c)(1)(vii) (2006).

The principal issue in this appeal is whether the Examiner has carried the burden of establishing a prima facie case of obviousness which turns on the issues addressed below.

The issues require that we first interpret the language of claims 1, 8, and 9 by giving the terms thereof the broadest reasonable interpretation in

their ordinary usage in context as they would be understood by one of ordinary skill in the art in light of the written description in the Specification unless another meaning is intended by Appellants as established therein, and without reading into the claim any disclosed limitation or particular embodiment. *See, e.g., In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004), and cases cited therein; *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997).

The plain language of independent claim 1 specifies any absorbent article comprising at least, among other things, in order: a topsheet; an odor reduction layer containing a metalphthalocyanine material; an “isolation means” between the odor reduction layer and at least part of the superabsorbent material in a fluid storage layer; and a fluid storage layer. Appellants’ contention claim 1 requires the topsheet “adjacent,” that is, “next to; adjoining,” the body facing surface of the fluid storage layer does not account for the claim limitation specifying the location of the odor reduction layer as “disposed at the body facing surface side of the fluid storage layer” and further separated therefrom by “an isolation means” which can be “a layer.” Br. 5; *see below* pp. 4-5. Thus, in the context of the claim language and in light of the written description in the Specification, the term “adjacent” is used in claim 1 in the sense of its other definition: “close to; lying near.”<sup>1</sup> Spec., e.g., 5:20-21. Therefore, we agree with the Examiner’s interpretation of the term “adjacent.” Ans. 5-6.

---

<sup>1</sup> See, e.g., **adjacent**, *The American Heritage Dictionary of The English Language* 21 (4th ed., Boston, Houghton Mifflin Company, 2000).

The transitional term “comprising” opens claim 1 to encompass any additional layers and materials. *See, e.g., Vehicular Techs. Corp. v. Titan Wheel Int'l, Inc.*, 212 F.3d 1377, 1383 (Fed. Cir. 2000); *In re Baxter*, 656 F.2d 679, 686 (CCPA 1981) (“As long as one of the monomers in the reaction is propylene, any other monomer may be present, because the term ‘comprises’ permits the *inclusion* of other steps, elements, or materials.”). Thus, the transitional term “comprising” opens claim 1 to include an article containing an additional fluid storage layer between the topsheet and the odor reduction layer. Indeed, there is no claim limitation specifying the relationship between the specified topsheet and the specified odor reduction layer, and even with the additional fluid storage layer, the specified fluid storage layer would still be “adjacent” the topsheet as we interpreted this claim term above.

Claim 1 specifies “isolation means . . . for isolating the metalphthalocyanine material from contacting at least a part of the superabsorbent material,” which constitutes means-plus-function language invoking the strictures of 35 U.S.C. § 112, sixth paragraph. *See, e.g., Texas Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1208 (Fed. Cir 2002), and cases cited therein. An issue raised by the record is whether the “corresponding structure and equivalents thereof” disclosed in the written description in the Specification include non-woven fabrics which are secured together by latex. *See Marcus*, col. 9, ll. 1-2; *see below* p. 7. *See, e.g., In re Donaldson Co.*, 16 F.3d 1189, 1195 (Fed. Cir. 1994) (*en banc*). Appellants disclose in the Specification that “[t]he isolation means can be formed by

any structure which can work for the isolation of the metalphthalocyanine material from the superabsorbent material.” Spec.

16:4-5; *see also* 16:5-8. “In a preferred embodiment, the isolation means is an interposed material disposed between the odor reduction layer and the superabsorbent material,” and “[p]referred interposed materials” include, among other things, “nonwoven webs” and “films. Spec. 16:8-12. “In a preferred embodiment, the isolation means is a . . . nonwoven layer which is disposed between the fluid storage layer and the odor reduction layer.”

Spec. 16:13-14. On this record, we find that the preferred embodiments disclosed in the Specification for “isolation means” include nonwoven layers and films and thus, combinations thereof, which in our opinion constitute disclosed “corresponding structure and equivalents thereof.”<sup>2</sup>

Dependent claim 8 limits the articles encompassed by claim 1 by specifying “wherein the odor reduction layer further comprises a viscosity control agent.” “The viscosity control agent functions to further promote uniform dispersion of the metalphthalocyanine material on the surface of the carrier means and permeation of the metalphthalocyanine material into the surface region of the carrier means.” Spec. 10:6-9. The “odor reduction layer includes a carrier means which holds or keeps the metalphthalocyanine material within the fluid storage layer through

---

<sup>2</sup> Neither the Examiner nor Appellants determined the “corresponding structure in the specification and equivalents thereof.” *See, e.g., Donaldson*, 16 F.3d at 1195 (“[T]he PTO was required by statute to look to Schuler’s specification and construe the ‘means’ language recited in the last segment of claim 1 as limited to the corresponding structure in the specification and equivalents thereof.”); 37 C.F.R. § 41.37(c)(1)(v) (2006) (the “corresponding structure” must be identified in the “Summary of claimed subject matter”).

physical or chemical bonds,” wherein the “carrier means” can be “[a]ny material known in the art” including, among other things, “fibrous material.” Spec. 8:9-20. We find no basis in the language of claim 8 or in the written description of the Specification to read any exemplified “viscosity control agent” for any particular “carrier means” as a limitation into claim 8. Spec, e.g., 8:9 to 12:22. *See, e.g., In re Zletz*, 893 F.2d 319, 321-22 (Fed. Cir. 1989). Thus, in light of the disclosure in the specification, we reasonably interpret “viscosity control agent” to include any aqueous solution that controls the viscosity of the metalphthalocyanine metal to any extent in applying it to the surface and surface region of a “fibrous material” carrier for that material.

Dependent claim 9 specifies that “the topsheet includes the odor reduction layer.” The difficulty here is that claim 1 specifies “a topsheet” and “an odor reduction layer disposed at the body-facing surface side of the fluid storage layer” as separate layers. We determine the disclosure of the term “layer” in the Specification does not provide for the incorporation of the odor reduction layer as part of the topsheet: “[h]erein, ‘layer’ does not necessarily limit the element to a single strata of material in that a layer may actually comprise laminates or combinations of sheets or webs of the requisite types of materials.” Spec. 4:23-25. We further determine the disclosure “[i]n a preferred embodiment, the top sheet includes and works as the odor reduction layer of the present invention,” does not provide for a separate odor reduction layer as claimed in claim 1 on which claim 9 depends. Spec. 6:4-5. Thus, a reasonable, non-speculative interpretation of the language of claim 9 in the context of the language of claim 1 and the

disclosure in the Specification is that the odor reduction layer is directly adjacent, that is, directly next to, the topsheet.

We find Marcus would have disclosed to one of ordinary skill in this art the embodiment of an adsorbent article, with reference to Figure 2, which has the layers, in order: permeable layer or topsheet 12; fluid storage layers 16 which contain superabsorbent particles 18; and, in the center of fluid storage layer 16, a sandwich layer formed by permeable nonwoven fabrics 20, 22 around odor absorbent siliceous molecular sieve material, wherein “[f]abrics 20, 22 are secured together by latex.” Marcus col. 8, l. 57 to col. 9, l. 2. “Alternatively, fabrics 20 and 22 may be positioned immediately adjacent the bottom or the top of the interior of the” article. Marcus col. 9, ll. 2-4. Marcus discloses the absorbent articles can be, among other things, disposable diapers and sanitary napkins.

We find Hasebe would have disclosed to one of ordinary skill in this art the use of metalphthalocyanine materials as odor absorbing material for absorbent fibrous bedding material. Hasebe, e.g., abstract and cols. 1-3. An aqueous solution of an iron phthalocyanine material is used to apply the material to the fibrous bedding materials. Hasebe, e.g., col. 4, ll. 14-19 and 62-67.

We determine the combined teachings of Marcus and Hasebe, the scope of which we determined above, provide sufficient evidence supporting the Examiner’s case that the claimed invention encompassed by claims 1, 8, and 9 as we interpreted these claims above, would have been *prima facie* obviousness to one of ordinary skill in the absorbent article arts familiar with materials used to reduce odor in the articles. We agree with the Examiner

that the absorbent article illustrated in Marcus's Figure 2 has the sandwich layer 20, 22 containing the odor reduction material in a position falling within the limitations of claim 1. Ans. 3 and 5-6. We further determine Marcus would have taught that the sandwich layer 20, 22 containing the odor reduction material can be positioned next to the topsheet 12; in other words, between topsheet 12 and fluid storage layer 16. This position of the odor reduction layer is encompassed by claims 1 and 9.

Thus, as the Examiner contends, the difference between the claimed absorbent articles of claims 1, 8, and 9 and the absorbent article of Marcus's Figure 2 is that the claimed article contains a metalphthalocyanine material as the odor reduction material while Marcus discloses siliceous molecular sieve material. Ans. 3. On this record, we agree with the Examiner's determination that, *prima facie*, one of ordinary skill in this art would have substituted Hasebe's metalphthalocyanine material for the siliceous molecular sieve material in Marcus' sandwich layer 20, 22 in the reasonable expectation of obtaining the same or similar results with respect to the reduction of odor in an absorbent article. With respect to claim 8, *prima facie*, Hasebe would have taught this person to apply the metalphthalocyanine material to the surface and surface region of the fibrous material of layers 20, 22 with an aqueous solution, wherein the aqueous solution falls within the "viscosity control agent" limitation as we interpreted this claim above. Thus, *prima facie*, one of ordinary skill in this art would have applied Hasebe's metalphthalocyanine material to Marcus's nonwoven fibrous material 20, 22 using an aqueous solution.

Accordingly, we are of the opinion that, *prima facie*, one of ordinary skill in this art routinely following the combined teachings of Marcus and Hasebe would have reasonably arrived at a claimed absorbent article encompassed by claims 1, 8, and 9, including all of the limitations thereof arranged as required therein, without recourse to Appellants' Specification. *See, e.g., KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1739 (2007) ("when a patent claims a structure already known in the prior art that is altered by mere substitution of one element for another known in the field, the combination must do more than yield a predictable result"); *In re Siebentritt*, 372 F.2d 566, 567-68 (CCPA 1967) (express suggestion to interchange methods which achieve the same or similar results is not necessary to establish obviousness); *see also In re Kahn*, 441 F.3d 977, 985-88 (Fed. Cir. 2006); *In re O'Farrell*, 853 F.2d 894, 903-04 (Fed. Cir. 1988) ("For obviousness under § 103, all that is required is a reasonable expectation of success." (citations omitted)); *In re Keller*, 642 F.2d 413, 425 (CCPA 1981) ("[T]he test [for obviousness] is what the combined teachings of the references would have suggested to those of ordinary skill in the art."); *In re Sovish*, 769 F.2d 738, 743 (Fed. Cir. 1985) (skill is presumed on the part of one of ordinary skill in the art); *In re Bozek*, 416 F.2d 1385, 1390 (CCPA 1969) ("Having established that this knowledge was in the art, the examiner could then properly rely, as put forth by the solicitor, on a conclusion of obviousness 'from common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference.'").

Upon reconsideration of the record as a whole in light of Appellants' contentions, we are of the opinion that Appellants have not successfully rebutted the *prima facie* case. We have carefully considered Appellants' contentions with respect to the interpretation of the terms of claim 1 and the teachings of Marcus and remain of the view we expressed in these respects above. Br. 3-6. We disagree with Appellants that a "viscosity control agent" must be "an additive to a liquid" as it can be any liquid which performs the functions for this "agent" specified in the Specification as we determined above. Br. 6-7. Furthermore, contrary to Appellants' contention, we remain of the view that one of ordinary skill in this art would have used Hasebe's aqueous solution to apply the metalphthalocyanine metal on Marcus's nonwoven fibrous material 20, 22. Br. 7. Finally, with respect to claim 9, we remain of the view that the same encompasses absorbent articles with an odor reduction layer directly next to the topsheet, and thus, contrary to Appellants' contentions, the claimed article is *prima facie* obvious over the combined teachings of Marcus and Hasebe for the reasons we expressed above.

Accordingly, based on our consideration of the totality of the record before us, we have weighed the evidence of obviousness found in the combined teachings of Marcus and Hasebe with Appellants' countervailing evidence of and argument for nonobviousness and conclude that the claimed invention encompassed by appealed claims 1 through 13 would have been obvious as a matter of law under 35 U.S.C. § 103(a).

The Primary Examiner's decision is affirmed.

Appeal 2008-2023  
Application 11/079,042

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).

**AFFIRMED**

ls/cam

THE PROCTER & GAMBLE COMPANY  
GLOBAL LEGAL DEPARTMENT – IP  
SYCAMORE BUILDING – 4TH FLOOR  
229 EAST SIXTH STREET  
CINCINNATI, OH 45202