The opinion in support of the decision being entered today
is *not* binding precedent of the Board

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN W. MOORE
and CHRISTOPHER S. MOORE

Appeal 2006-2969
Application 10/394,075
Technology Center 1700

Decided: June 26, 2007

Before CHARLES F. WARREN, CATHERINE Q. TIMM, and
LINDA M. GAUDETTE, *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 36 in the Office action mailed September 19, 2005. 35 U.S.C. §§ 6 and 134(a) (2002); 37 C.F.R. § 41.31(a) (2005).

We affirm the decision of the Primary Examiner.

Claims 1, 25, and 31 illustrate Appellants' invention of a textile material having a discontinuous hydrophobic treatment on its surface, and are representative of the claims on appeal:

1. A textile material comprising a surface and a discontinuous hydrophobic treatment located on said surface, said discontinuous hydrophobic treatment comprising discrete, individual hydrophobic particles that are more hydrophobic than said surface, said hydrophobic particles adhering directly to the surface, said surface consisting essentially of a surface of a fiber or a yarn,

wherein said discontinuous hydrophobic treatment is in the range of about 0.1% to about 8% by weight of said textile material and increases the water release weight rate near dryness of said textile.

25. A fabric comprising a hydrophilic surface and a discontinuous hydrophobic treatment that is more hydrophobic than said hydrophilic surface, said discontinuous hydrophobic treatment comprising discrete, individual particles located directly on said hydrophilic surface, said hydrophilic surface consisting essentially of a surface of a fiber or a yarn,

wherein said discontinuous hydrophobic treatment is in the range of about 0.1% to about 8% by weight of said fabric and increases the water release weight rate near dryness of said fabric.

31. A textile material comprising a surface and a discontinuous hydrophobic treatment located on said surface, said surface consisting essentially of a surface of a fiber or a yarn, said discontinuous hydrophobic treatment comprising discrete, individual particles of one or more of polyvinyl acetate and a polyvinyl acetate/acrylic copolymer, said individual particles adhering directly to the surface, wherein said discontinuous hydrophobic treatment is present in an amount sufficient to increase the water release weight rate near dryness of said textile.

The Examiner relies on the evidence in these references:

Trask	US 4,232,087	Nov. 4, 1980
Gunn	US 5,590,420	Jan. 7, 1997
Katz	US 5,888,914	Mar. 30, 1999
Stern	US 5,902,757	May 11, 1999
Keller	US 6,683,126 B2	Jan. 27, 2004

Lack US 6,746,491 B2 Jun. 8, 2004

Appellant requests review of the following grounds of rejection all advanced on appeal (Br. 5-6).

claims 1 through 7, 9 through 14, 19, and 25 through 30 under 35 U.S.C. § 102(b) as anticipated by Trask (Answer 3-5);

claims 1, 2, 4 through 7, 9 through 14, 19, and 25 through 30 under 35 U.S.C. § 102(e) as anticipated by Lack (*id.* 5-6);

claims 1, 2, 4, 6, 7, 9 through 16, 19, 20, and 25 through 29 under 35 U.S.C. § 102(e) as anticipated by Keller (*id.* 6-8);

claims 3 and 8 under 35 U.S.C. § 103(a) as unpatentable over Lack as applied to 1, 2, 4 through 7, 9 through 14, 19 and 25 through 30 further in view of Katz (*id.* 8-9);

claims 3, 17, and 18 under 35 U.S.C. § 103(a) as unpatentable over Lack as applied to 1, 2, 4 through 7, 9 through 14, 19 and 25 through 30 further in view of Stern (*id.* 9-10);

claims 20 through 22 under 35 U.S.C. § 103(a) as unpatentable over Lack as applied to 1, 2, 4 through 7, 9 through 14, 19 and 25 through 30 further in view of Gunn (*id.* 10-11);

claims 23 and 24 under 35 U.S.C. § 103(a) as unpatentable over Lack in view of Gunn as applied to claims 20 through 22 further in view of Katz (*id.* 11);

claims 3, 5, 8, and 30 under 35 U.S.C. § 103(a) as unpatentable over Keller as applied to 1, 2, 4, 6, 7, 9 through 16, 19, 20, and 25 through 29 further in view of Katz (*id.* 11-12);

claims 3, 17, and 18 under 35 U.S.C. § 103(a) as unpatentable over Keller as applied to 1, 2, 4, 6, 7, 9 through 16, 19, 20, and 25 through 29 further in view of Stern (*id.* 12-13);

claims 21 and 22 under 35 U.S.C. § 103(a) as unpatentable over Keller as applied to 1, 2, 4, 6, 7, 9 through 16, 19, 20, and 25 through 29 further in view of Gunn (*id.* 13-14);

claims 23 and 24 under 35 U.S.C. § 103(a) as unpatentable over Keller in view of Gunn as applied to claims 20 and 21 further in view of Katz (*id.* 14); and

claims 16, and 31 through 36 under 35 U.S.C. § 103(a) as unpatentable over Keller as applied to 1, 2, 4, 6, 7, 9 through 16, 19, 20, and 25 through 29 (*id.* 14-15).

Appellants argue independent claims 1 and 25 in the grounds of rejection under § 102(b) and § 102(e) as representative of the appealed claims as a group in each ground (Br. 6-10). Appellants rely on the same arguments with respect to the grounds of rejection under § 103(a). Thus, we decide this appeal based on appealed claims 1 and 25 as representative of the grounds of rejection and Appellants' groupings of claims. 37 C.F.R. § 41.37(c)(1)(vii) (2005).

The Examiner contends Trask discloses the fabric surface is discontinuously complexed with a complex compound and "the hydrophobic particles are attracted and held directly to said surface by van der Waals forces" (Answer 3, citing Trask col. 2, ll. 7-57). The Examiner contends Lack discloses the fabric surface discontinuously has a urea resin thereon and "the hydrophobic particles are adhered directly to said surface" (*id.* 5, citing Lack col. 2, 26-46, and col. 3, ll. 19-30). The Examiner contends Keller discloses the fabric surface discontinuously has a binder thereon and "the hydrophobic particles are adhered directly to said surface" (*id.* 6-7, citing Keller col. 3, ll. 29-35). The Examiner contends it appears the discontinuous treatment taught in each reference is identical to the claimed treatment and would inherently increase the water release rate near dryness of the textile material (*id.* 3-4, 5, and 7).

Appellants contend the electron micrographs set forth in the Evidence Appendix "show the control fibers treated with water only versus the fibers of the invention treated with a low level of an aqueous dispersion of PTFE[,

that is, polytetrafluoroethylene,] particles . . . without any additional additives" (Br. 6-7). Appellants contend the micrographs show "the invention" with "the particles . . . clearly seen attached directly to the fibers in clusters only one or two particles thick," and depict a "particle" on a "surface" (*id.* 7). Appellants contend the applied references do not show "particles . . . either adhering directly to the surface of the textile material or located directly on the hydrophobic surface of the fabric" and thus, do not anticipate the claimed invention (*id.*).

In this respect, Appellants contend Trask "discloses a chromium complex of a long-chain fluorochemical to couple [PTFE] particles to organic fibers," and Lack "discloses that urea resin reacts with the hydroxyl groups on the fibers and forms crosslinks with the PTFE particles to adhere them to the fiber (Br. 7-8, citing Trask col. 2, ll. 42-57, and Lack col. 1, ll. 63-67, and col. 3, ll. 37-42). Appellants contend Keller "discloses PTFE particles in a film-forming binder applied to a surface to form a solid film" (*id.* 8, citing Keller col. 2, ll. 37-47, and col. 3, ll. 29-31). Appellants contend, with respect to each reference, the PTFE particles do not "contact the surface directly" (*id.*). Appellants contend the linking components of the references, that is, Trask's chromium complex, Lack's urea resin-hydroxyl crosslinks, and Keller's film forming binder, do not become "a part of the surface such that the PTFE particle is then in direct contact" because of the claim limitation "said surface consisting essentially of a surface of a fiber or a yarn" (*id.*).

Appellants further contend the claimed and prior art surface treatments are not identical and thus, "there is no reason to believe these

surface treatments would inherently increase the water release rate near dryness" (Br. 9). Appellants contend Trask's chromium complex and Lack's urea resin would attract water and Keller's binder prevents free access of water to the exposed hydrophobic particles and adjacent fiber surfaces (*id.*). Appellants contend the purpose of each reference is to totally prevent water from penetrating the fibers, while the claimed invention does not impede water penetration in providing differential resistance between the particle treated and non-treated fiber surfaces (*id.* 9-10).

The Examiner responds that, in Trask, the particle is in direct contact with the fiber surface through the chromium complex compound because this compound becomes part of the fiber and part of the particle, the latter through van der Waals forces, and thus, is not a separate entity (Answer 16). The Examiner contends that in the phrase "adhering directly to the surface" in claim 1, the term "adhere" "is defined as 'To stick fast by or as if by suction or glue,'" and in the phrase "located directly on" in claim 25, the term "on" "is defined as 'Used to indicate position above and supported by or in contact with'" (Answer 16-17; original emphasis omitted). The Examiner thus contends Appellants never claim "that the particles are necessarily in contact with the fibers" and the claims "allow for the existence of a binder (glue) between the particles and the fibers," arguing that "without a binder or van der Waals forces the particles and fibers would not adhere together" (*id.* 17). The Examiner contends "[t]he current claims do not exclude the presence of a compound from 'the surface'" which is claimed as "consisting essentially of (restricted open claim language) a surface of a fiber or yarn" (*id.*). In this respect, the Examiner contends the Specification

discloses the particles are deposited on the fiber surface via a dispersion which can "comprise water and may comprise additional additives," but does not disclose that a chromium complex compound in the dispersion materially affects the basic and novel characteristics of the surface (*id.* 17-18, citing Specification ¶¶ 0066 and 0067). The Examiner contends Trask discloses the PTFE particles improve the hydrophobicity of the fibers (*id.* 18-19, citing Trask col. 1, ll. 10-16, and col. 2, ll. 47-57). The Examiner relies on the same contentions with respect to Lack and Keller (*id.* 19-21, citing Lack col. 1, ll. 10-16, and col. 2, ll. 47-57, and Keller col. 1, ll. 4-9 and 36-42).

The issues in this appeal are whether the Examiner has carried the burden of establishing a prima facie case of anticipation in each of the grounds of rejection under §§ 102(b) and 102(e) by establishing that, as a matter of fact, each of Trask, Lack, and Keller show each and every element of the claimed invention arranged as required by claims 1 and 25, either expressly or under the principles of inherency, in a manner sufficient to have placed a person of ordinary skill in the art in possession thereof. *See, e.g., In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990). We note again here that Appellants rely on the same arguments with respect to the grounds of rejection under § 103(a).

We interpret claims 1 and 25 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, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004); *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000); *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

The plain language of independent claim 1 specifies any manner of textile material comprising at least any manner of surface consisting essentially of at least any manner of any surface of any area of any fiber or any yarn, the surface having located thereon about 0.1% to about 0.8% by weight of the textile material of any discontinuous hydrophobic treatment, wherein the treatment on the surface is discontinuous to any extent. The discontinuous hydrophobic treatment comprises at least some amount, however small, of any manner of discrete, individual hydrophobic particles that are more hydrophobic than said surface, the hydrophobic particles "adhering directly to the surface." The textile material manifests the property of "increase in the water release rate near dryness" to any extent over the corresponding untreated textile material (Specification, e.g., ¶¶ 0003, 0063, and 0064). The plain language of independent claim 25 differs from that of claim 1 in specifying any fabric which comprises at least any manner of hydrophilic surface, and the hydrophobic particles are "located directly on said hydrophilic surface."

The open-ended term "comprising" in the preamble and in the body of claims 1 and 25 opens the textile material and the fabric to include any manner of other surfaces of other materials, and the claimed discontinuous

hydrophobic treatment to include any manner of additional materials such as residue from any carrier of a treatment composition. *See*, *e.g., Exxon Chem. Pats., Inc. v. Lubrizol Corp.*, 64 F.3d 1553, 1555, 35 USPQ2d 1801, 1802 (Fed. Cir. 1995) ("The claimed composition is defined as comprising - meaning containing at least - five specific ingredients."); *In re Baxter*, 656 F.2d 679, 686-87, 210 USPQ 795, 802-03 (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."). Indeed, the claim language and the Specification limit the hydrophobic treatment only to the extent that the same includes "particles that are more hydrophobic than the surface" to be treated (Specification, e.g., ¶ 0009) In this respect, the Specification discloses the hydrophobic particles can be of any materials, and describes embodiments wherein the hydrophobic particles "[p]referably . . . contain at least one polymeric material . . . [and] may include inorganic and organic non-polymer additives," wherein "[s]uitable inorganic additives include, for example, pigments . . . and colorants" (*id.*, e.g., ¶ 0069). We find no claim language or Specification disclosure which precludes additives that react with the "surface" of the fibers and yarns.

With respect to other materials of the treatment, the Specification describes embodiments wherein certain hydrophobic particles are applied to the surface in "dispersions [that] are an aqueous dispersion that can include additives such as wetting agents, pigments, and stabilizers" (*id.*, e.g., ¶¶ 0012 and 0067). We find no claim language or Specification disclosure which precludes hydrophobic treatment materials that coat or chemically

modify the "surface" of the fibers and yarns. Indeed, there is no disclosure that such materials do not coat or chemically modify the surface of the fiber and yarn until after the hydrophobic particles adhere to or located directly on the surface. The hydrophobic treatment can be applied to one surface and not other surfaces of the fibers and yarns constituting the textile materials and fabrics (*id.*, e.g., ¶ 0084).

The interpretation of the claim terms "a surface" and "a hydrophilic surface" as well as the limitation "surface consisting essentially of a surface of a fiber or yarn" are in contention with respect to the hydrophobic particles "located on said surface" and "adhering directly to said surface" in claim 1 and "located directly on said hydrophilic surface" in claim 25. We find no limitation in the claim language or Specification disclosure on the term "surface" with respect to the fiber or yarn of a textile material or fabric other than the "surface" must be less hydrophobic than the hydrophobic particles of the hydrophobic treatment discontinuously present thereon, which "surface" thus includes hydrophilic surfaces (Specification, e.g., ¶¶ 0009, 0010, 0014, 0060-0062, and 0069). Indeed, it is disclosed that the surface properties of such fibers and yarns can be altered by coating, including common textile finishes such as dyes (*id.*, e.g., ¶¶ 0005, 0080, 0099, 0176, 0177, and 0217-0219), as well as by chemical modification (*id.*, e.g., ¶¶ 0004 and 0080). In this respect, in Example 3, dye and PTFE transferred from a "red polyester shirt" treated with PTFE to a cotton shirt "control" during washing (*id.*, e.g., ¶ 0099).[1] These findings comport with

[1] In view of the evidence in Specification Example 3, to the extent PTFE or other hydrophobic particle can be removed from prior art textile materials

our determination above that the claimed hydrophobic surface treatment and hydrophobic particles include additives that can coat or chemically modify the "surface" of the fibers and yarns.

The mechanism(s) which facilitate adherence of the hydrophobic particles directly to the "surface" so as to be located directly thereon is/are not described in the Specification. The Specification examples merely describe the application of PTFE particles via aqueous dispersion to surfaces of fibers and yarns in various textile materials and fabrics, several of which are chemically modified or coated, including, in Example 3, the dyed red polyester shirt "treated previously with PTFE." The submitted micrographs of "fibers of the invention treated with a low level of an aqueous dispersion of PTFE particles" along with the reported observation "[t]he particles are

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and fabrics during cleaning processes or normal wear-and-tear such that the presence of the particles becomes discontinuous on a surface of fibers and yarns in these prior art materials, and the washing of the prior art materials with untreated textile materials and fabrics results in the transfer of the particles to the untreated materials such that the surface is discontinuously treated therewith, claims 1 and 25 read on such prior art materials. In this respect, Appellants have done no more than identify the property of an increase in the water release rate near dryness of such prior art textile materials and fabrics, which discovery of a new benefit of the prior art materials does not render the same again patentable simply because those using the materials may not have appreciated the property. *See, e.g., Spada*, 911 F.2d at 707, 15 USPQ2d at 1657, and cases cited therein; *W.L. Gore & Assocs. v. Garlock, Inc.*, 721 F.2d 1540, 1548, 220 USPQ 303, 309 (Fed. Cir. 1983) ("[I]t is . . . irrelevant that those using the invention may not have appreciated the results. . . . Were that alone enough to prevent anticipation, it would be possible to obtain a patent for an old and unchanged process." (citations omitted)). We leave it to the Examiner to consider this matter upon any further prosecution of the appealed claims subsequent to the disposition of this appeal.

clearly seen attached directly to the fibers in clusters only one or two particles thick" also do not elucidate any attachment mechanism (Br. Evidence Appendix). Thus, the written description in the Specification establishes no more than that by any mechanism, the hydrophobic particles adhere directly to and are located directly on a surface of a fiber or a yarn, including surfaces which have been coated or chemically modified. Indeed, we find no basis in the language of claims
1 and 25 or in the Specification to read certain of the Specification examples to the extent evinced in the micrographs into the claims as a limitation. *See, e.g.*, *Zletz*, 893 F.2d at 321-22, 13 USPQ2d at 1322.

Accordingly, on this record, we cannot agree with Appellants that the phrase "surface consisting essentially of a surface of a fiber or yarn" excludes surfaces of fibers and yarns which have been coated or chemically modified, including coatings and chemical modification which facilitate adherence of the hydrophobic particles to such fibers in the manner described to one skilled in this art by the applied references. The claim term "consisting essentially of" is used in claim construction to indicate, for example, that "the invention necessarily includes the listed ingredients and is open to unlisted ingredients that do not materially affect the basic and novel properties of the invention." *PPG Indus., Inc. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1354, 48 USPQ2d 1351, 1353-54 (Fed. Cir. 1998). Thus, the interpretation of this term in this instance requires a determination of the surfaces of any fibers and any yarns that would materially affect the basic and novel characteristics of the claimed textile materials and fabrics, because

this phrase customarily excludes such materials. *See In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976) (explaining *Ex parte Davis*, 80 USPQ 448 (Pat. Off. Bd. App. 1948)). In arriving at this determination, the written description in Appellants' Specification must be considered. *Herz*, 537 F.2d at 551-52, 190 USPQ at 463 ("[I]t is necessary and proper to determine whether [the] specification reasonably supports a construction" that would exclude or include particular ingredients.); *see also PPG Indus.*, 156 F.3d at 1354-57, 48 USPQ2d at 1353-56 (Patentees "could have defined the scope of the phrase 'consisting essentially of' for purposes of its patent by making clear in its specification what it regarded as constituting a material change in the basic and novel characteristics of the invention. The question for our decision is whether PPG did so.").

Our review of the written description in the Specification, summarized above, reveals no teachings of coated or chemically modified surfaces which do not permit particles more hydrophobic than such surfaces to adhere directly thereto or be directly located thereon to the extent that the basic and novel characteristics of the claimed textile materials and fabrics is affected. Reliance on evidence which merely shows hydrophobic particles adhering to untreated fibers does not satisfy Appellants' burden to establish that the written description in the Specification evinces which coated and chemically modified surfaces are deleterious to the basic and novel characteristics of the claimed invention and thus, are excluded from the claims by reasons of the transitional term "consisting essentially of." *See PPG Indus.,* 156 F.3d at 1354, 48 USPQ2d at 1353-54*; Herz,* 537 F.2d at 551-52, 190 USPQ at 463.

We agree with the Examiner's findings of fact from each of Trask, Lack, and Keller (Answer 3-4, 5, 6-7, and 16-21; *see above* pp. 4 and 6-7).

We agree with the Examiner's position that, prima facie, each of Trask, Lack, and Keller describes to one skilled in this art the claimed textile materials and fabrics encompassed by claims 1 and 25 as we have interpreted these claims above. Indeed, each of Trask and Lack provides a chemically modified surface of a fiber or a yarn and Keller provides a coated surface of a fiber or yarn, each of the surfaces being less hydrophobic than the particles, and facilitates the adhesion and location of hydrophobic particles of the hydrophobic treatment directly thereon in a discontinuous manner. Appellants do not dispute the Examiner's finding that the amounts of hydrophobic particles applied in the references fall within the amounts of the discontinuous hydrophobic treatment on the claimed textile material and fabric, and that the particles are applied discontinuously.

The Examiner's findings that, prima facie, the textile materials and fabrics taught by the reference are identical to the claimed textile materials and fabrics from which it reasonably appears that the prior art products have the same properties as the claimed products, shifts the burden to Appellants to patentably distinguish the claimed products over those of the prior art by effective argument or evidence. We are not convinced that Appellants have carried this burden with respect to the property of an increased water release rate near dryness of the claimed textile materials and fabrics. *See*, *e.g.*, *Spada*, 911 F.2d at 708-09, 15 USPQ2d at 1657-58; *In re Best*, 562 F.2d 1252, 1254-56, 195 USPQ 430, 432-34 (CCPA 1977).

Appellants' contentions based on Trask's chromium complex, Lack's urea resin, and Keller's film binder do not, of course, address the properties of the textile materials and fabrics as a whole described to one skilled in this art by these references. Neither do Appellants' contentions based on hydrophobic particle surfaces preventing water penetration of the fiber because, on this record, the claimed textile materials and fabrics having the discontinuous hydrophobic treatment in the same weight percent based on the textile material and fabric as the prior art materials would reasonably appear to prevent water penetration. Indeed, Appellants must establish that the prior art textile materials and fabrics which otherwise satisfy the claim limitations exhibit no increase in the water release rate near dryness, as textile materials and fabrics which have the slightest increase in this rate are encompassed by claims 1 and 25 as we have interpreted these claims above. This Appellants have not done. In this respect, it is well settled that unsupported arguments of counsel are entitled to little, if any, weight. *See, e.g., In re Payne*, 606 F.2d 303, 315, 203 USPQ 245, 256 (CCPA 1979); *In re Lindner*, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972).

Accordingly, based on our consideration of the totality of the record before us, we have weighed the evidence of anticipation found in each of Trask, Lack, and Keller with Appellants' countervailing evidence of and argument for non-anticipation and conclude that the claimed invention encompassed by appealed claims 1 through 7, 9 through 14, 16, 19, 20, and 25 through 30 would have been anticipated as a matter of fact under 35 U.S.C. §§ 102(b) and 102(e) (2002) as applied by the Examiner.

Appellants rely on the same contentions with respect to the grounds of rejection of claims 3, 5, 8, 16 through 18, 20 through 24, and 30 through 36 under 35 U.S.C. § 103(a) (Br. 10). Accordingly, for the above reasons we affirmed these grounds of rejection.

The Primary Examiner's decision is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (2006).

AFFIRMED

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