UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FREDERICK L. TRAVELUTE, III
and STANLEY KISER HOVIS

Appeal 2006-2352
Application 10/065,436
Technology Center 1700

Decided: March 8, 2007

Before PETER F. KRATZ, CATHERINE Q. TIMM, and
JEFFREY T. SMITH, *Administrative Patent Judges*.

KRATZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 2, 4-38, and 72-80. We have jurisdiction pursuant to 35 U.S.C. § 6.

The claimed invention is directed to a hollow filament, a staple fiber cut from the filament, a nonwoven fabric formed from such fibers and an absorbent structure formed from the fabric. The products are characterized

by specified fluid absorption properties. The product absorption property is recited as a volume percent moisture absorption and/or is conveyed in terms of other allegedly related physical properties, such as length of the fibers and/or the number or functional character of openings in the filament. Claims 2, 4, 8, 15, 16, 28, 29, 30, 37, and 72 are illustrative and reproduced below:

2. A hollow polyester filament consisting essentially of polyethylene terephthalate having sufficient openings therein for said hollow filament to substantially fill with a liquid selected from the group consisting of water, water-based solutions, and water-based suspensions.

4. A staple fiber cut from the hollow filament of Claim 2.

8. A nonwoven fabric formed from a plurality of staple fibers according to Claim 4.

15. A hollow staple fiber consisting essentially of polyethylene terephthalate and having sufficient openings therein for said staple fiber to substantially fill with water.

16. A polyester filament having a moisture absorption capability of between about 10 and 30 percent by volume.

28. A staple fiber consisting essentially of polyethylene terephthalate and having a moisture absorption capability of between about 10 and 30 percent by volume.

29. A hollow filament having an asymmetric cross section and having sufficient openings therein for said hollow filament to substantially fill with liquid.

30. A hollow polyester filament having an asymmetric cross section and having sufficient openings therein for said hollow filament to

substantially fill with a liquid selected from the group consisting of water, water-based solutions, and water-based suspensions.

37. A hollow staple fiber consisting essentially of polyethylene terephthalate;

said staple fiber having sufficient openings therein for said staple fiber to substantially fill with a liquid; and

said staple fiber and its hollow portion having respective circular cross sections and wherein said hollow portion is not coaxial with said staple fiber.

72. A staple filament having a coaxial opening entirely therethrough, the filament having a length defined by the minimum length sufficient to support a meniscus of water in the coaxial opening and a maximum length at which the filament will fill entirely with a liquid selected from the group consisting of water and water-based solutions and suspensions.

The Examiner relies on the following prior art references as evidence in rejecting the appealed claims:

Shiozaki	US 4,336,307	Jun. 22, 1982
Hirakawa[1]	JP S57-139600	Aug. 28, 1982
Tamiya[2]	JP H3-287848	Dec. 18, 1991
Jennergren	US 6,368,990	Apr. 09, 2002

Claims 2, 4, 5, and 11 through 15 stand rejected under 35 U.S.C.

[1] Our references to Hirakawa in this decision are to the English language translation filed September 28, 2004. The Examiner refers to this translation at page 2 of the Final Office Action.

[2] Our references to Tamiya are to the English language translation filed September 28, 2004. The Examiner refers to this translation at page 2 of the Final Office Action.

§ 102(b) as being anticipated by Shiozaki. Claims 2, 4 through 10, and 72 through 80 stand rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Hirakawa (JP 57139600A). Claims 16 through 38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tamiya in view of Jennergren.

We affirm the anticipation rejection over Shiozaki, reverse the other rejections, and remand the application to the Examiner for further consideration.

I. § 102 REJECTION OVER SHIOZAKI

Appellants argue the claims together. We select claim 2 as the representative claim on which we shall decide the appeal as to this rejection.

The Examiner contends that Shiozaki describes, expressly or inherently, a hollow polyethylene terephthalate (PET) containing filament possessing sufficient capillary openings therein to provide good absorbency (substantially fill with a liquid such as water), and which filament falls within the scope of Appellants' representative claim 2.

Appellants contend that the transitional phrase "consisting essentially of" serves to exclude the presence of organic sulfonates of the type and amount used by Shiozaki in forming the claimed hollow polyester filament.

ISSUE AND SUMMARY RESOLUTION

Have Appellants identified reversible error in the Examiner's anticipation rejection in their Brief? More specifically, have Appellants established that the application record requires that the broadest reasonable construction of claim 2 excludes using organic sulfonates in forming a PET-

containing filament such that claim 2 could not read on the alkali treated PET- containing hollow filaments of Shiozaki?

We answer these questions in the negative. Consequently, we affirm the Examiner's anticipation rejection of claims 2, 4, 5, and 11 through 15 over Shiozaki.

FINDINGS OF FACT

The record supports the following findings of fact by a preponderance of the evidence.

Appellants' Specification describes the subject invention as being directed to liquid absorbent materials, particularly highly absorbent fibers. Appellants' Claim 2, as reproduced above, employs "consisting essentially of" terminology in denominating the claimed hollow polyester filament.

Appellants' Specification provides preferred embodiments wherein "the filament consists essentially of polyethylene terephthalate ('PET')" (Specification 4), but does not furnish an express definition for the term "consisting essentially of." (*See* the Specification in its entirety).

The Specification provides that polyester is a preferred filament forming material and notes that "polyester" is "a manufactured fiber in which the fiber forming substance is any long chain synthetic palmer [sic; polymer] composed of at least 85% by weight of an ester of a substituted aromatic carboxylic acid, including but not restricted to substituted terephthalate units and parasubstituted hydroxyl benzoate units" (Specification 4). The Specification further explains that the above-quoted definition is consistent with a U.S. Federal Trade Commission standard, 16 C.F.R. § 303.7, and is generally adhered to by the industry. *Id.*

The Specification discloses that "the provision of openings along the filament or fiber allows air to escape and thus prevents air pressure from limiting the capillary draw into the filament or fiber. In turn, this allows the filament or fiber to substantially fill with water, thus greatly increasing the absorbent capacity of the filament. . . ." (Specification 6, ¶ [0031]).

The Specification discloses that the hollow filament can be contacted with various chemical compositions or mechanically cracked to form the openings therein (Specification 12-14).

The Specification does not address any basic and novel characteristics of the claimed subject matter that would be detrimentally affected by the inclusion of any sulfonates in the formation of the filament. See the Specification in its entirety.

The Examiner has found that Shiozaki discloses hollow polyester filaments, which filaments have fine pores and an affinity for absorbing water corresponding to that claimed (Answer 3). Shiozaki discloses that 90 molar percent of the ester repeating units of the polyester are of a formula I. *See*, *e.g.*; *Shiozaki* at col. 1, l. 56 through col. 2, l. 51. Moreover, the Examiner has correctly found that polyethylene terephthalate is a preferred polyester filament described by Shiozaki (Answer, 4). *See*, *e.g.*, Shiozaki; (col. 3, ll. 36-38).

Shiozaki discloses: (1) providing a pore-forming agent comprising an organic sulfonate compound of a specified formula (III); (2) blending the organic sulfonate with the polyester via melt-spinning; and (3) alkali treating the blend to remove at least a portion of the organic sulfonate compound from the polyester filaments thereby forming a number of fine pores in the

polyester hollow filaments that connect the hollow to the outside of the filaments (col. 2, ll. 16-51).

Shiozaki describes the formation of polyester filaments having "a very large internal surface and a large number of capillaries which are effective for absorbing water or moisture" (col. 6, ll. 63-66). Shiozaki discloses blending the pore-forming agent with the polyester (e.g., the preferred PET), followed by completely or partially removing the pore forming agent from the filaments to form and connect fine pores (capillaries) to each other so as to connect the atmosphere outside each filament to each hollow therein with the resultant hollow filaments having good water absorbency (col. 8, l. 43 through col. 9, l. 54 and exs. 1-9). Thus, Shiozaki describes complete removal of the pore forming agent from the PET-containing filaments, as one embodiment.

PRINCIPLES OF LAW

The "phrase 'consisting essentially of' limits the scope of a claim to the specified ingredients and those that do not *materially affec*t the *basic* and *novel* characteristic(s) of a composition." *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976); *see also PPG Indus., Inc. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1354, 48 USPQ2d 1351, 1353-54 (Fed. Cir. 1998) ("By using the term "consisting essentially of," the drafter signals 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").

During examination, "claims ... are to be given their broadest reasonable interpretation consistent with the specification, and ... claim

language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004). In assessing a broadest reasonable claim construction wherein a potentially exclusionary "consisting essentially of" transistional phrase is involved, it is appropriate that Appellants bear the burden of: (1) showing the basic and novel characteristics of their claimed invention, and (2) establishing how those characteristics would be materially changed by any allegedly excluded component of an applied reference. *See In re DeLajarte*, 337 F.2d 870, 873-74, 143 USPQ 256, 258 (CCPA 1964); *Ex parte Hoffman*, 12 USPQ2d 1061, 1063-64 (BPAI 1989).

Anticipation does not require that the reference teach what the Appellants teach in their Specification, but only that the claims on appeal "read on" something disclosed in the reference. *See Kalman v. Kimberly Clark Corp.*, 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983). Anticipation is a factual determination. *See In re Baxter Travenol Labs.*, 952 F.2d 388, 390, 21 USPQ2d 1281, 1283 (Fed. Cir. 1991) (*citing In re Bond*, 910 F.2d 831, 833, 15 USPQ2d 1566, 1567 (Fed. Cir. 1990).

When a claimed product appears to be substantially identical to a product disclosed by the prior art, the burden is on the Applicants to prove that the product of the prior art does not necessarily or inherently possess characteristics or properties attributed to the claimed product. *In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990). Under such circumstances, a rejection may be properly made under 35 U.S.C. § 102 or

§ 103. *In re Spada,* 911 F.2d 705, 708, 15 USPQ2d 1655, 1658; *In re Fitzgerald,* 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980); *In re Best,* 562 F.2d 1252, 1254-55, 195 USPQ 430, 433 (CCPA 1977).

Arguments not made in the Briefs are considered to be waived. *See* 37 C.F.R. § 41.37(c)(vii) (2006).

ANALYSIS

As we noted above, representative claim 2 employs "consisting essentially of" transistional phrasing. Our review of the record reveals, however, that Appellants have not specifically pointed to any persuasive evidence establishing that the use of sulfonate pore-formers with or without the retention of some of the pore-former with the filaments, as taught by Shiozaki, would detrimentally affect the basic and novel characteristics of Appellants' invention. Consequently, Appellants' unsupported arguments in the Brief fall significantly short of establishing that the "consisting essentially of" transistional phrase of representative claim 2 requires exclusion of a hollow PET-containing filament prepared using sulfonate pore-formers as described by Shiozaki.

Appellants refer to the four corners of the claim and MPEP § 2163(II)(A)(1) in the Brief (Br. 5), however, our review of representative claim 2 reveals no exclusion of the use of the sulfonate pore-formers, as disclosed by Shiozaki, in manufacturing the claimed filament. To the extent Appellants' reference to the four corners of the claim and the cited Section of the MPEP in the Brief refers to the claim term "polyester," Appellants have not articulated in their arguments how that representative claim term would exclude the use of sulfonate pore-formers in producing the claimed

PET- containing filament. (*See* the *Brief* in its entirety.) As we noted above, Appellants refer to polyester as being "a manufactured fiber in which the fiber forming substance is any long chain synthetic palmer [sic; polymer] composed of at least 85% by weight of an ester of a substituted aromatic carboxylic acid, including but not restricted to substituted terephthalate units and parasubstituted hydroxyl benzoate units" (Specification 4). Appellants' Specification further discloses that their filaments are prepared using methods, which include chemically treating or chemically modifying the hollow polyester filaments, to render the filaments fluid (water) absorbable (Specification 12-14). Given the above, Appellants assertion that the broadest reasonable construction of representative claim 2 must be found to exclude polyester (PET) filaments prepared with the use of chemical treatments, such as employed by Shiozaki, is not supported by the record before us.

We observe that Appellants do not advance any particularized and/or persuasive arguments in the Brief that serve to establish that the Examiner reversibly erred in assessing that the number of pores (openings) formed in the hollow PET-containing filaments of Shiozaki are sufficient to result in filaments possessing substantial water-filling characteristics, as claimed. This is especially so given that a high water absorbing capacity filament is disclosed as being obtained by the pore-forming treatment of Shiozaki. Thus, the pores formed, according to Shiozaki's technique, would reasonably be expected to correspond to the claimed "sufficient openings…" (Representative Claim 2). *See, e.g.,* Answer 3 and Shiozaki, exs. 1-9.

It follows that, on this record, the Examiner has presented a prima facie case of anticipation, including a factual showing and determination that

representative claim 2 reads on the hollow PET-containing polyester filaments of Shiozaki, which filaments include pores that render the filaments water absorbing (substantially water–filling).

CONCLUSION OF LAW

Appellants have not established that the application record requires a broadest reasonable construction of claim 2 excluding organic sulfonates from being used in manufacturing the filaments, such that claim 2 could not read on the alkali-treated PET-containing hollow filaments of Shiozaki. Nor have Appellants otherwise identified reversible error in the Examiner's anticipation rejection over Shiozaki.

II. § 102/§ 103 REJECTION OVER HIRAKAWA

Claims 2 and 72 are the only independent claims subject to the Examiner's rejections over Hirakawa (JP S57-139600).

The Examiner contends that Hirakawa discloses empty core fibers that anticipate under § 102 or, in the alternative, would have rendered obvious, within the meaning of § 103, the subject matter of claims 2, 4-10, and 72-80 based on inferences from asserted commonalities.

Appellants contend that the Examiner has not reasonably shown that Hirakawa meets or suggests the limitations of either of claims 2 and 72 based on the empty core disclosure thereof.

ISSUE AND SUMMARY RESOLUTION

Have Appellants identified reversible error in the Examiner's anticipation and/or obviousness rejections in their Brief? More specifically,

have Appellants established that the Examiner erred in failing to establish that Hirakawa describes or suggests all the limitations of either claim 2 or claim 72?

We answer these questions in the affirmative for each statutory basis for rejection. Consequently, we reverse the Examiner's anticipation and obviousness rejections over Hirakawa.

PRINCIPLES OF LAW

In addition to the principles of law set forth above with respect to the Examiner's first presented grounds of rejection, we note that:

The factual determination of anticipation requires the disclosure in a single reference of every element of the claimed invention, either explicitly or inherently. *See In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). It is also well-settled that an Examiner may shift the burden to Appellants by showing how a prior art structure substantially corresponds to a claimed structure such that it would be reasonable to presume that the prior art structure would also possess a claimed function employing an inherency theory. *See In re Schreiber*, 128 F.3d at 1477, 44 USPQ2d at 1432. In particular, inherency may not be established by probabilities or possibilities and that the mere fact a certain thing may result from a given set of circumstances is not sufficient. *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981), *citing In re Hansgirg v. Kemmer*, 102 F.2d 212, 214, 40 USPQ 665, 667 (CCPA 1939). In relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the

applied prior art. Additionally, it has long been established that the initial burden of establishing a prima facie basis to deny patentability to a claimed invention rests upon the Examiner. *Ex parte Levy*, 17 USPQ2d 1461, 1463-1464 (BPAI 1990).

Under 35 U.S.C. § 103(a), the Examiner carries the initial burden of establishing a prima facie case of obviousness. *In re Piasecki*, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). As part of meeting this initial burden, the Examiner must determine whether the differences between the subject matter of the claims and the prior art "are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art" (emphasis added). 35 U.S.C. § 103(a)(1999); *Graham v. John Deere Co.*, 383 U.S. 1, 14, 148 USPQ 459, 465 (1966). The applied prior art reference(s) as a whole must be viewed from the perspective of one of ordinary skill in the art to determine whether "some suggestion" is present to arrive at the claimed subject matter. *Cf. In re Mills*, 470 F.2d 649, 651, 176 USPQ 196, 198 (CCPA 1972).

FINDINGS OF FACT/ANALYSIS

The Examiner has correctly found that Hirakawa discloses an embodiment of fiber that has an "empty core" (Answer 5; Hirakawa, para. bridging 656-57. [3]

[3] The Examiner's reference to the Derwent abstract at page 5 of the Answer is taken as a reference to the disclosure presented at the paragraph bridging pages 656 and 657 of the English language Translation of Hirakawa's publication.

However, the Examiner acknowledges that Hirakawa "does not explicitly teach … a minimum length sufficient to support a meniscus of water in the coaxial opening and a maximum length at which the liquid will entirely fill with a liquid as required by claim 72…." (Answer 6). Furthermore, we note that the Examiner has not identified, nor can we find, where in Hirakawa an empty core fiber is described as including a filament with a coaxial opening entirely therethrough as recited as a limitation of independent claim 72. Nor has the Examiner pointed out how Hirakawa fairly implies a description or suggestion of a hollow PET filament with sufficient openings to substantially fill with liquid as required by claim 2.

We recognize that the Examiner has pointed out certain commonalities in size that exist between the generic description of polyester fibers used in Hirakawa and the size of the fibers specified in Appellants' Specification and several dependent claims (Answer 6 and 13). However, the Examiner has not fairly articulated, on this record, how those general commonalities standing alone are sufficient to warrant the factual inference the Examiner desires. In particular, the Examiner has not laid sufficient factual groundwork to show how the briefly described empty core fiber embodiment of Hirakawa would necessarily be understood by one of ordinary skill in the art as describing a hollow PET filament formed with sufficient openings therein to substantially fill with a liquid (claim 2), or that the empty core fibers of Hirakawa would necessarily have an axial opening extending entirely therethrough (claim 72). Nor has the Examiner furnished a reasonable basis, on this record, as to why one of ordinary skill in the art would have been led to provide the empty core fibers of Hirakawa with sufficient openings to substantially fill with a liquid (claim 2). Moreover,

the Examiner has not provided persuasive rationale, on this record, as to why one of ordinary skill in the art would have been led to manufacture the empty core fibers of Hirakawa with an axial opening extending entirely therethrough (claim 72).

Thus, on this record, an adequate factual basis for shifting the burden to Appellants on the patentability issues raised here has not been supplied, prima facie, by the Examiner.

CONCLUSIONS OF LAW

We conclude that the Examiner erred by failing to show that Hirakawa describes or suggests all the limitations of either claim 2 or claim 72 on this record. Thus, we determine that Appellants have identified reversible error in the Examiner's anticipation and obviousness rejections in their Brief.

II. § 103 REJECTION OVER TAMIYA in view of JENNERGREN

Claims 16, 28, 29, 30, and 37 are the only independent claims subject to the Examiner's obviousness rejection over Tamiya in view of Jennergren.

The Examiner contends that the claimed "absorption capability range is inherent to the fibers of Tamiya in view of Jennergren" (Answer 14) and maintains that the combined teachings of the applied references would have rendered obvious, within the meaning of § 103, the subject matter of claims 16-38 based on inferences from asserted commonalities.

Appellants contend that the Examiner has not reasonably shown that the applied references would have led one of ordinary skill in the art to a product with the absorptive capacity limitations as required in any of the

commonly rejected claims either alone or in any suggested combination thereof.

ISSUE AND SUMMARY RESOLUTION

Have Appellants identified reversible error in the Examiner's § 103(a) rejection in their Brief? More specifically, has the Examiner erred in failing to establish how the collective teachings of the applied prior art references would have suggested all the limitations of each rejected claim to one of ordinary skill in the art, including the production of a filament or fiber possessing a functional absorptive capacity as claimed?

We answer these questions in the affirmative. Consequently, we reverse the Examiner's obviousness rejection of claims 16-38.

FINDINGS OF FACT/ANALYSIS

Tamiya (JP H3-287848) discloses composite sheath-core fibers that are used in making bulky non-woven fabrics. Tamiya's fiber core is formed with hollow parts and the core is made from a relatively high melting point polymer, such as PET. As for forming the fiber sheath, Tamiya teaches employing a relatively low melting point polymer, such as polyethylene. Tamiya presents a melt extrusion method for manufacturing the sheath-core fiber. *See, e.g.,* Tamiya at 322.

The Examiner relies on Jennegren for disclosing fabrics that employ hollow staple fibers in one embodiment and continuous spunbonded filaments in another embodiment (Answer 10-11).

The Examiner has found that Tamiya discloses that the composite fibers thereof can be used in the formation of liquid absorbing products, such as diapers (Answer 7 and Tamiya 321). In particular, the Examiner has

acknowledged that Tamiya (alone or taken with Jennergren) does not explicitly teach a moisture absorption capability of about 10 to about 30 volume percent as recited in independent appealed claims 16 and 28 (Answer 11). The Examiner maintains a presumption of inherency and/or obviousness for that claim limitation. *Id.* The Examiner finds support for that asserted presumption based on an alleged "use of like materials (i.e., a hollow filament consisting essentially polyethylene terephthalate which is used for liquid absorbing materials indicating a level of moisture absorptivity) which would result in the claimed property." *Id*. Regarding independent appealed claims 29, 30, and 37, the Examiner asserts that Tamiya's "hollow section provides 'sufficient openings to substantially fill with liquid'" (Answer 8 and 9). However, the Examiner has not established where Tamiya describes the core-sheath fibers/filaments as providing absorbent properties, as opposed to the filaments being used in articles, which articles (diapers) are attributed absorbency characteristics.

In essence, the Examiner takes the position that it is appropriate to shift the burden to Appellants to establish that the applied references do not possess the variously claimed filament absorption capability, whether that capability is recited as a volume percent range (independent claims 16 and 28) or is recited as a number of openings sufficient to permit the filament to substantially fill with water (independent claims 29, 30, and 37). Indeed, it is well-settled that an Examiner may shift the burden to Appellants by showing how a prior art structure substantially corresponds to an Appellants' structure such that it would be reasonable to presume that the prior art structure would also possess a claimed function employing an inherency theory. *See In re Schreiber*, 128 F.3d at 1477, 44 USPQ2d at 1432.

However, in the present case, the Examiner has not established with sufficient specificity how the applied prior art substantially corresponds to each claim feature to support the inference that the prior art would also be attended by all of the claimed functional absorption features. In particular, Appellants have correctly noted that Tamiya's fiber product includes a sheath part, which is melt extruded about the hollow core part. The Examiner has not fairly explained how the Tamiya composite fiber reasonably corresponds to the filament constructions of Appellants so as to fairly expect that the sheath covered hollow core filaments of Tamiya would necessarily possess sufficient openings to substantially fill with an aqueous liquid, or to reasonably expect that the sheath covered hollow core filaments of Tamiya would have absorbency characteristics in volume percent comparable to those claimed by Appellants for their filaments. After all, Appellants' Specification describes the subject filaments as being made absorbent by opening the filaments to allow communication of the interior thereof with a location outside of the filament as opposed to surrounding an interior hollow-containing core part of a fiber with a thermally bonded sheath part without any directions for the subsequent opening thereof, as Tamiya seems to instruct (*See* Specification, ¶¶ 0031, 0032; and Tamiya, ex. 1 and fig. 1). Consequently, the Examiner has not established, prima facie, how the applied Tamiya, alone or in combination with Jennergren, teaches or suggests a filament or fiber that is made in substantially the same way and using substantially the same materials as Appellants disclose in making their claimed filaments, such that an inference can be reasonably made that Tamiya's fibers would be expected to possess absorbency properties as claimed.

Moreover, the Examiner has not a provided persuasive rationale, on this record, as to why one of ordinary skill in the art would have been led to manufacture the empty core fibers of Tamiya with sufficient openings so as to obtain a fiber having the claimed absorbency properties.

Thus, on this record, an adequate factual basis for shifting the burden to Appellants on the patentability issues raised here has not been supplied, prima facie, by the Examiner.

CONCLUSIONS OF LAW

We conclude that the Examiner erred by failing to show that the collective teachings of Tamiya and Jennergren would have suggested all the limitations of each rejected claim to one of ordinary skill in the art, including a product filament possessing the absorption characteristics as claimed. Thus, we determine that Appellants have identified reversible error in the Examiner's obviousness rejection over Tamiya and Jennergren in their Brief.

REMAND

As we noted above, Shiozaki describes the formation of hollow polyester filaments having "a very large internal surface and a large number of capillaries which are effective for absorbing water or moisture" (col. 6, ll. 63-66). Shiozaki provides that from 5 through 50, such as 10 through 30 of the cross-sectional area of the filaments can be hollow (col. 5, ll. 54-59). Moreover, Shiozaki discloses that such hollow filaments or staple fibers are useful in nonwoven fabrics (col. 6, ll. 52-60). Given the above, prior to disposition of this application, the Examiner must review Shiozaki and determine whether or not the teachings of Shiozaki alone or in combination

with other known prior art would have rendered any of claims 6-10, 16-38, and 72-80 unpatentable.

For example only, dependent claim 8 depends from affirmed rejected claim 4 and adds the requirement of forming a nonwoven fabric from a plurality of staple fibers according to claim 4. As we noted above, Shiozaki discloses absorbent hollow filaments or staple fibers that are useful in preparing nonwoven fabrics (col. 6, ll. 52-60). Thus, the Examiner should determine whether Shiozaki alone or in combination with other known prior art would have rendered the formation of a nonwoven fabric as recited in claim 8 prima facie unpatentable. If so, the Examiner should enter an appropriate rejection. Similarly, the Examiner should determine whether Shiozaki alone or in combination with other prior art would have rendered the subject matter of any of the other claims (claims 6, 7, 16-38, and 72-80) unpatentable.

ORDER

The Examiner's decision to reject claims 2, 4, 5, and 11 through 15 under 35 U.S.C. § 102(b) as being anticipated by Shiozaki is affirmed. The Examiner's decision to reject claims 2, 4 through 10, and 72 through 80 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Hirakawa (JP 57139600A) and to reject claims 16 through 38 under 35 U.S.C. § 103(a) as being unpatentable over Tamiya in view of Jennergren is reversed.

On remand, this application is being returned to the Examiner's jurisdiction. The Examiner should review claims 6-10, 16-38, and 72-80 and Shiozaki and determine whether or not any of those claims is subject to the entry of a rejection employing Shiozaki as a reference. The Examiner is required to take appropriate action in light of the above.

AFFIRMED-IN-PART/REMANDED

sld/clj

SUMMA, ALLAN & ADDITON, P.A.
11610 NORTH COMMUNITY HOUSE RD
SUITE 200
CHARLOTTE, NC 28277