

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GUSTAVO PALACIO, MARIA CLARA GARCIA,
PRISCILLA M. JONES, FRED ROBERT RADWANSKI,
PABLO RAMIREZ, JOHN RICHARD SKERRETT,
HENRY SKOOG, and BERNARDO VANEGAS

Appeal 2006-2949
Application 10/012,768
Technology Center 1700

Decided: September 25, 2006

Before WARREN, TIMM, and JEFFREY T. SMITH, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the decision of the Examiner finally rejecting claims 1 through 17, all of the claims in the application.

Claim 1 illustrates Appellants' invention of a hydraulically entangled nonwoven fabric, and is representative of the claims on appeal:

1. A hydraulically entangled nonwoven fabric comprising:

recycled synthetic fibers and fiber-like materials comprising at least one thread element composed of synthetic material having at least one irregular distortion generated by hydraulic fracture of the thread element to separate it from a bonded fibrous material while the bonded fibrous material is suspended in a liquid.

The references relied on by the Examiner are:

Adam	5,573,841	Nov. 12, 1996
Milding	6,037,282	Mar. 14, 2000

The Examiner has rejected appealed claims 1 through 17 under 35 U.S.C. § 103(a) as being unpatentable over Adam in view of Milding (Answer 3-6), and has provisionally rejected appealed claims 1 through 17 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 through 17 of copending Application 10/012,766 (final action mailed May 23, 2005 (final action) 1).^{1,2}

Appellants argue claim 1 with respect to the first ground of rejection, and generally addresses the second ground of rejection (Br. 10-12 and 12). Thus, we decide this appeal based on appealed claim 1 as representative of the grounds of rejection and Appellants' groupings of claims. 37 C.F.R. § 41.37(c)(1)(vii) (2005).

We affirm.

¹ The Examiner has withdrawn the ground of rejection of claims 1 through 17 under 35 U.S.C. § 103(a) as being unpatentable over Adam in view of Kean and further in view of Didwania (Answer 3).

² The Examiner states that the provisional ground of rejection under the judicially created doctrine of obviousness-type double patenting is not presented for review in Appellants' Brief (Answer 3) when in fact Appellants state their intention with respect to this ground (Br. 12). Thus, on

We refer to the Answer and to the Brief for a complete exposition of the positions advanced by the Examiner and Appellants.

OPINION

We have carefully reviewed the record on this appeal and based thereon find ourselves in agreement with the supported position advanced by the Examiner that, prima facie, the claimed hydraulically entangled nonwoven fabric encompassed by appealed claim 1 would have been obvious over the combined teachings of Adam and Milding to one of ordinary skill in this art at the time the claimed invention was made. Accordingly, since a prima facie case of obviousness has been established by the Examiner, we again evaluate all of the evidence of obviousness and nonobviousness based on the record as a whole, giving due consideration to the weight of Appellants' arguments in the Brief. *See generally, In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

We agree with the Examiner's findings of fact from the references and conclusions of law based on this substantial evidence as set forth in the Answer, to which we add the following for emphasis.

The plain language of claim 1, couched in product-by-process format, specifies any manner of hydraulically entangled nonwoven fabric comprising at least: any amount of recycled synthetic fibers and any amount of any manner of synthetic fiber-like materials comprising at least any amount of at least one thread element composed of any manner of synthetic

this record and in this instance, we are of the opinion that Appellants have complied with 37 C.F.R. § 41.37(c)(1)(vi) (2005).

material having at least one irregular distortion that is the same as if it were generated by process resulting in the hydraulic fracture of the thread element to separate it from a bonded fibrous material while the bonded material is suspended in a liquid. *See generally, In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985).

We find no specific definition for the claim term “irregular distortion” as it pertains to “generated by hydraulic fracture.” Indeed, Appellants describe “irregular distortions” in the written description in the specification as “may be in the form of bends[,] . . . flattened segments[,] . . . expanded segments[,] . . . and combinations thereof” of thread elements (specification, e.g., 3:14-17, and 14:18-20). According to Appellants, the “deformations and distortions” may be generated by “‘metal to fiber’ interaction,” “hydraulic fragmentation” and “by tearing, slicing and breaking of fiber and/or filaments” (*id.*, e.g., 13:15-21). We find no disclosure in the written description in the specification which distinguishes the “irregular distortion generated by hydraulic fracture” from “irregular distortion” generated by “‘metal to fiber’ interaction” and by tearing, slicing and/or breaking fibers and filaments. Thus, in the absence of a specific definition for the claim terms in the written description in the specification, we interpret the language of the “irregular distortion generated by hydraulic fracture” in light of that disclosure to encompass any irregular distortion that is the same as if it were generated in any manner during the fracturing of thread elements in a bonded fibrous material suspended in a liquid. *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 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).

Furthermore, the use of the open-ended term “comprising” in transition and in the body of claim 1 opens the claimed fabric to include any amount of any manner of additional fibers and fiber-like materials, new and/or recycled, as well as any other ingredients. *See generally, 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.”).

The Examiner submits that the mechanical recycling process used by Milding to recover synthetic fibers and fiber-like materials results in thread elements having at least one irregular distortion, and points out that Appellants disclose mechanical shredding in the specification at page 3, ll. 15-21 (Answer 5-6, 7-8). Thus, the Examiner argues that the process of Milding generates identical or substantially identical thread elements having at least one irregular distortion as claimed (*id.*). On this basis, the Examiner determines that prima facie one of ordinary skill in this art would have modified the hydraulically entangled nonwoven fabric of Adam by using the recycled synthetic fibers and fiber-like materials of Milding in the reasonable expectation of obtaining useful fabrics, and that the manner in which the fibers in the claimed fabrics are produced as specified in claim 1

does not patentably distinguish over the fabrics resulting from the combined teachings of the references (*id.* 5,6).

Appellants submit that Adam would not have taught or suggested the use of recycled synthetic fibers and fiber-like materials in hydraulically entangled nonwoven fabrics, and that neither Adam nor Milding would have taught using at least one thread element of synthetic material having at least one irregular distortion generated according to the process specified by claim 1, contending out that Adam would not have taught recycling fibers obtained by mechanically shredding waste fibers (Br. 10-11). Appellants further contend that the recycled fibers having at least one irregular distortion prepared by the specific process result in fabrics having “greater utility than 100 percent virgin fibers . . . due to their unique shape and greater surface area” (Br. 11). In this respect, Appellants argue that the mechanical shredding of Milding results in “incomplete fiberization of bonded nonwoven webs” and “undesirable bits of fabric or ‘flocks,’” and “would likely melt the thermoplastic material . . . into unusable clumps of polymer” (Br. 12).

We find that Adam would have disclosed to one of ordinary skill in this art that hydraulically entangled nonwoven fabrics can be prepared from, among others, fibrous material which is pulp fibers that can be, among others, recycled fibers (col. 3, ll. 19-22). We further find that Milding would have acknowledged that it was known in the art to prepare hydraulically entangled nonwoven fabrics from staple thermoplastic fibers, pulp fibers and mixtures thereof for use as drying and disposable materials for industry and health-care, and that mixed synthetic and natural fiber nonwoven and textile

waste can be mechanically shredded to obtain freed recycled fibers (col. 1, ll. 9-25 and 41-44). Milding would have disclosed to one of ordinary skill in this art that recycled fibers can be used alone and with new fibers to prepare hydroentangled fiber webs useful as compact absorbent material. Milding would have further disclosed that the mechanically recycled fibers can be, among others, synthetic fibers, such as thermoplastic fibers, and pulp fibers obtained by mechanically shredding nonwoven and textile waste, which may partly be in the form of flocks. See Milding, e.g., col. 1, l. 58, to col. 3, l. 17.

We find substantial evidence in the combined teachings of Adam and Milding to support the Examiner's position. In comparing claim 1, as we have interpreted this claim above, with the combined teachings of Adam and Milding, we determine that one of ordinary skill in this art would have used Milding's mechanically recycled pulp fibers, which can be used to prepare hydroentangled nonwoven fabrics, as the recycled pulp fibers used by Adam in order to prepare hydroentangled nonwoven fabrics that reasonably appear to be identical or substantially identical to the claimed hydroentangled nonwoven fabrics. In our view, the disclosure in Milding alone would have described hydroentangled nonwoven fabrics prepared from any manner of mechanically recycled fibers, with and without new fibers, which can be used as an absorbent, such as a wipe, the reference hydroentangled nonwoven fabrics thus reasonably appearing to be identical or substantially identical to the claimed hydroentangled nonwoven fabrics.

Indeed, the Examiner points out and we have found (*see above* p. 4), the mechanical shredding of fibers suspended in a liquid in the hydraulic fabric shredding process disclosed by Appellants includes a mechanical

shredding component characterized as “‘metal to fiber’ interaction.” On this record, we find that it reasonably appears that the claimed at least one irregular distortion in at least one thread element imparted by the mechanical shredding component of the process specified in claim 1 is identical or substantially identical to an irregular distortion imparted to at least one thread element by the mechanical shredding process of Milding even though the latter process is not conducted in a liquid.

Accordingly, the burden has shifted to Appellants to submit effective argument or objective evidence in order to patentably distinguish the claimed hydroentangled nonwoven fabrics encompassed by claim 1 over the teachings of the references even though the ground of rejection is under § 103(a). *See generally, In re Best*, 562 F.2d 1252, 1254-56, 195 USPQ 430, 432-34 (CCPA 1977) (“Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. *See In re Ludtke*, [441 F.2d 660, 169 USPQ 563 (CCPA 1971)]. Whether the rejection is based on ‘inherency’ under 35 USC 102, on ‘prima facie obviousness’ under 35 USC 103, jointly or alternatively, the burden of proof is the same, and its fairness is evidenced by the PTO’s inability to manufacture products or to obtain and compare prior art products. [Footnote and citation omitted.]”); *In re Skoner*, 517 F.2d 947, 950-51, 186 USPQ 80, 82-83 (CCPA 1975) (“Appellants have chosen to describe their invention in terms of certain physical characteristics Merely choosing to describe their invention in this manner does not render

patentable their method which is clearly obvious in view of [the reference]. [Citation omitted.]”); *cf. In re Spada*, 911 F.2d 705, 708-09, 15 USPQ2d 1655, 1657-58 (Fed. Cir. 1990) (“The Board held that the compositions claimed by Spada ‘appear to be identical’ to those described by Smith. While Spada criticizes the usage of the word ‘appear,’ we think that it was reasonable for the PTO to infer that the polymerization by both Smith and Spada of identical monomers, employing the same or similar polymerization techniques, would produce polymers having the identical composition.”).

We are of the opinion that Appellants have not carried their burden. The issue here is not whether the references would have taught the hydraulic fabric shredding process disclosed by Appellants, but whether the hydraulically entangled nonwoven fabric as claimed is identical or substantially identical to the hydraulically entangled nonwoven fabric that would have been reasonably suggested to one of ordinary skill in this art by the combined teachings of Adam and Milding and indeed, by the teachings of Milding alone. *See In re Wertheim*, 541 F.2d 257, 271, 191 USPQ 90, 103-04 (CCPA 1976) (“These claims are cast in product-by-process form. Although appellants argue, successfully we have found, that the [reference] disclosure does not suggest . . . appellants’ process, the patentability of the *products* defined by the claims, rather than the processes for making them, is what we must gauge in light of the prior art.”). The fact that the mechanical shredding process disclosed by Milding can result in “flocks” does not distinguish the claimed product which can include such “fiber-like materials” in view of this claim term as well as the claim term “comprising” as we interpreted claim 1 above. Finally, the contention that the claimed

fabrics have greater utility than fabrics entirely from new fibers does not constitute an argument with respect to the properties of the claimed fabric vis-à-vis the teachings of the applied prior art. *Cf. In re Hoch*, 428 F.2d 1341, 1343-44, 166 USPQ 406, 409 (CCPA 1970) (evidence must provide an actual comparison of the properties of the claimed compositions with compositions of the reference).

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 Adam and Milding with Appellants' countervailing evidence of and argument for nonobviousness and conclude that the claimed invention encompassed by appealed claims 1 through 17 would have been obvious as a matter of law under 35 U.S.C. § 103(a).

We summarily affirm the provisional ground of rejection under the judicially created doctrine of obviousness-type double patenting because Appellants have stated that “[a]n appropriate terminal disclaimer will be provided, if necessary, upon the allowance of claims in the present application” (Br. 12).

The Examiner's decision is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (2005).

AFFIRMED

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