

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HEIKE BARTL and UWE MARG

Appeal 2008-4943
Application 10/484,642
Technology Center 1700

Decided: January 15, 2009

Before TERRY J. OWENS, CATHERINE Q. TIMM, and
MICHAEL P. COLAIANNI, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL
STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 40-84, which are all of the pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

The Invention

The Appellants claim a dyed and/or printed nonwoven and a method for making it. Claim 40 is illustrative:

40. A dyed and/or printed nonwoven, comprising:
at least one of microfibers and microfilaments of synthetic
polymers, the synthetic polymers including at least one polyester component
and at least one polyamide component; and
at least one azo dye produced on the nonwoven.

The References

Harmuth	3,081,141	Mar. 12, 1963
Liechti	3,234,206	Feb. 8, 1966
Rochat	3,928,314	Dec. 23, 1975
Kogel	4,017,256	Apr. 12, 1977
Bühler	4,065,254	Dec. 27, 1977
Wegmann	4,202,815	May 13, 1980
Groten	5,899,785	May 4, 1999

The Rejections

The claims stand rejected under 35 U.S.C. § 103 as follows:
claims 40-50 over Groten; claims 40-51, 60-62, 69-71 and 82-84 over
Groten in view of Harmuth; claims 52-54, 57, 59, 63-68 and 72-81 over
Groten in view of Harmuth, Bühler and Kogel; claim 55 over Groten in view
of Harmuth, Bühler and Wegmann; claim 56 over Groten in view of
Harmuth, Bühler and Rochat; and claim 58 over Groten in view of Harmuth,
Bühler and Liechti.

OPINION

We affirm the Examiner's rejections.

Issue

Have the Appellants shown reversible error in the Examiner's
determination that the applied references disclose or would have rendered

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prima facie obvious, to one of ordinary skill in the art, each element of the claimed invention?

Rejection of claims 40-50 over Groten

Among claims 40-50, the Appellants separately argue only claims 42 and 48 (Br. 9-10). We therefore limit our discussion to claims 42, 48 and one of claims 40, 41, 43-47, 49 and 50, i.e., claim 40. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2007).

Findings of Fact

Groten discloses “a nonwoven lap of very fine continuous filaments or microfilaments” (col. 1, ll. 7-9). The lap is comprised of at least two materials which can be polyester (polyethylene terephthalate) and polyamide (col. 1, ll. 43-46; col. 5, ll. 32-33; col. 7, ll. 49-50; col. 10, l. 33). The lap can be dyed (col. 5, ll. 1-3). The lap filaments are composite filaments formed of at least three elementary filaments that preferably are at least partially separated into their elementary filaments by means including mechanical techniques such as intense needle punching and pressurized fluid streams (col. 2, ll. 36-48).

Analysis

Claim 40

The Appellants rely (Br. 8-9; Reply Br. 2) upon their Specification (¶ 0002) which discloses:

Difficulties arise in the dyeing or printing process, particularly when the textile material contains different plastic components, such as polyester and polyamide, since, typically their dyeing characteristics vary considerably. This is described, for example, in BASF’s “Manual-Dying and Finishing of Polyamide Fibres and Their Blends with Other Fibers” B358e/12.72, p. 149.

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The record does not indicate that the Appellants have provided a copy of the cited reference. Even if dyeing blended polyester and polyamide would have involved difficulties, Groten's disclosure that such blends can be dyed (col. 1, ll. 7-9, 43-46; col. 5, ll. 1-3, 32-33; col. 7, ll. 49-50; col. 10, l. 33) would have provided one of ordinary skill in the art with a reasonable expectation of success in dying such a blend. For a *prima facie* case of obviousness to be established, all that is required is a reasonable expectation of success, not absolute certainty. *See In re O'Farrell*, 853 F.2d 894, 904 (Fed. Cir. 1988) ("Obviousness does not require absolute predictability of success For obviousness under § 103, all that is required is a reasonable expectation of success").

The Examiner finds that "azo dyes are by far the most common dyes used to dye textile fibers and fabrics" (Ans. 4).

The Appellants argue that "there is absolutely no support given for this assertion" (Br. 8).

The Appellants, however, do not state that the Examiner's finding is incorrect. Hence, we accept it as fact. *See In re Kunzmann*, 326 F.2d 424, 425 n.3 (CCPA 1964). Accordingly, we conclude that it would have been *prima facie* obvious to one of ordinary skill in the art to use, as Groten's dye for dyeing a blend of polyester and polyamide fibers, an azo dye.

We therefore are not convinced of reversible error in the rejection of claims 40, 41, 43-47, 49 and 50 over Groten.

Claim 42

The Appellants argue that there is no disclosure in Groten of microfilaments that are unsplit (Br. 9-10; Reply Br. 3).

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Groten's disclosure that at least partially separating the composite filaments into their elementary filaments is merely preferred (col. 2, ll. 36-48) would have indicated to one of ordinary skill in the art that the filaments can be unsplit. Moreover, the non-separated portion of the partially separated filaments are unsplit.

Thus, we are not persuaded of reversible error in the rejection of claim 42.

Claim 48

The Appellants argue that Groten does not disclose a staple-fiber nonwoven (Br. 10; Reply Br. 3).

The Examiner finds that Groten's intense needle punching and pressurized streams of fluid (col. 2, ll. 36-48) cut the fibers and entangle them, thereby forming a staple-fiber nonwoven (Ans. 12-13). Because this finding is reasonable and has not been challenged by the Appellants, we accept it as fact. *See Kunzmann*, 326 F.2d at 425 n.3.

Accordingly, we are not convinced of reversible error in the rejection of claim 48.

Rejection under 35 U.S.C. § 103 of claims 40-51, 60-62, 69-71 and 82-84 over Groten in view of Harmuth

The Appellants argue claims 40-51, 60-62, 69-71 and 82-84 in two groups: 1) claims 40-50,¹ and 2) claims 51, 60-62, 69-71 and 82-84 (Br. 8-

¹ The Appellants state that claims 42 and 48 are separately argued (Br. 9-10; Reply Br. 3). Those claims are addressed above with respect to the rejection over Groten, and the Examiner does not rely upon Harmuth with respect to those claims (Ans. 12-13). Hence, we group claims 42 and 48 with claims 40, 41, 43-47, 49 and 50 in the rejection over Groten in view of Harmuth.

11). Hence, we limit our discussion to one claim in each group, i.e., claims 40 and 51. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2007).

Findings of Fact

Harmuth colors organic polymeric materials such as woven or nonwoven fabrics with azo dyes (col. 1, ll. 10-14). In one of Harmuth's examples the fabric is a nonwoven polyester (polyethylene terephthalate) (col. 3, ll. 43-45), and in another example the fabric is a polyamide (6/6 nylon) (col. 4, 54). Harmuth teaches that “[o]rder of addition of ingredients, time and temperature of dyeing and type of dyeing equipment used are additional requirements which will be obvious to those skilled in dyeing” (col. 3, ll. 33-36).

Analysis

Claim 40

The Appellants argue that “Harmuth teaches azo dyeing of nylon fabric or polyester fabric, but not of dyeing [sic] a combined polyester/polyamide component” (Br. 9). The Appellants argue that Harmuth’s use of different conditions when dyeing a polyamide in Example VI and a polyester in Example VII would have indicated to one of ordinary skill in the art that dyeing polyamides and polyesters require separate processes (Br. 9; Reply Br. 2).

Harmuth also uses different conditions when dyeing polyesters in Examples I and VII. Because Harmuth does not disclose that different conditions are required for dyeing polyesters and polyamides, and because Harmuth exemplifies the use of different conditions for dyeing polyesters,

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Harmuth would not have indicated to one of ordinary skill in the art that dying conditions are unique to each fiber material. Harmuth's teaching that “[o]rder of addition of ingredients, time and temperature of dyeing and type of dyeing equipment used are additional refinements which will be obvious to those skilled in dyeing” (col. 3, ll. 33-36) indicates that the conditions required for dyeing particular fibers or combinations thereof would have been determinable by one of ordinary skill in the art through no more than routine experimentation. It generally is considered to have been *prima facie* obvious to one of ordinary skill in the art to vary disclosed parameters to some extent for purposes of optimization. *See In re Woodruff*, 919 F.2d 1575, 1578 (Fed. Cir. 1990); *In re Kulling*, 897 F.2d 1147, 1149 (Fed. Cir. 1990); *In re Aller*, 220 F.2d 454, 456 (CCPA 1955); *In re Sebek*, 465 F.2d 904, 907 (CCPA 1972).

For these reasons, in addition to those given above regarding the rejection of claims 40-50 over Groten, we are not persuaded of reversible error in the rejection of claims 40-50 over Groten in view of Harmuth.

Claim 51

The Appellants rely upon their arguments set forth with respect to claims 40-50 (Br. 10-11; Reply Br. 4).

Those arguments are not persuasive for the reasons given above with respect to the rejections of those claims.

The Appellants argue that Harmuth does not disclose a fast color salt and a fast color base (Br. 11).

The Examiner finds (Ans. 13-14):

Harmuth teaches treating polyethylene terephthalate with a diazotized napthylamine, a formaldehyde/naphthalene sulfonic acid condensation

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product, a sulfate salt and a derivative of naphthoic acid (Example III, column 4), which meet the limitations of the fast color salt and fast color base. Harmuth teaches treating nylon or wool with an aminoazobenzene, a sulfonate (Example VI, column 4), which meet the limitations of the fast color salt and fast color base.

The Appellants do not challenge the Examiner's findings (Reply Br. 4). Hence, we accept those findings as fact. *See Kunzmann*, 326 F.2d at 425 n.3.

Accordingly, we are not persuaded of reversible error in the rejection of claim 51 or claims 60-62, 69-71 and 82-84 that stand or fall therewith.

*Rejection under 35 U.S.C. § 103 of
claims 52-54, 57, 59, 63-68 and 72-81 over
Groten in view of Harmuth, Bühler and Kogel*

Findings of Fact

Bühler discloses dyeing leather and textiles with azo dyes, preferably at room temperature, and discloses slop pad dyeing treatment (abstract; col. 10, ll. 7-13). Bühler indicates that fastness of dyed materials to rubbing, washing, chlorine and light is desirable (col. 1, ll. 29-32).²

Analysis

The Appellants argue, with respect to claims 52-54, 57, 59, 63-68 and 72-81, that Bühler and Kogel do not remedy the deficiency in Groten and Harmuth as to claim 51 from which those claims directly or indirectly depend (Br. 11-12; Reply Br. 4).

As discussed above regarding the rejection of claim 51, that deficiency does not exist.

² A discussion of Kogel is not necessary to our decision.

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Hence that argument does not persuade us of reversible error in the rejection of claims 52-54, 57, 59, 63-68 and 72-81.

The Appellants separately argue claims 74 and 75 (Br. 12; Reply Br. 5).

Regarding claim 74, which requires a temperature during pad dyeing treatment of -10 to 60 °C, the Appellants argue there is no support for the Examiner's argument (Ans. 15) that Bühler's silence regarding the pad dyeing temperature implies that the temperature is room temperature (Br. 12; Reply Br. 5).

Bühler's disclosure that the dyeing process preferably is at room temperature (abstract; col. 10, ll. 7-13), and Bühler's lack of any indication that the disclosed slop pad dyeing treatment is to be carried out at any different temperature, would have led one of ordinary skill in the art to carry out the slop pad dyeing treatment at room temperature.

Hence, we are not convinced of reversible error in the rejection of claim 74.

With respect to claim 75, which requires pad dyeing treatment for a duration of not longer than 10 seconds, the Appellants argue that there is no support for the Examiner's argument (Ans. 15-16) that Bühler's pad dyeing treatment time would have been determined by one of ordinary skill in the art by optimization to obtain fastness to rubbing, washing, chlorine and light which Bühler indicates are desirable (col. 1, ll. 29-32).

The Appellants disclose that their "treatment duration in the pad dyeing method is typically very short and preferably not more than 10 seconds" (Spec. ¶ 0035). The Appellants do not indicate that their pad dyeing treatment time of no longer than 10 seconds is unconventional in the

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pad dyeing treatment art. Hence, the Examiner's argument that one of ordinary skill in the art, through no more than routine optimization of Bühler's pad dying treatment, would have arrived at treatment times including times no longer than 10 seconds (Ans. 15-16) appears reasonable.

Consequently, we are not persuaded of reversible error in the rejection of claim 75.

Rejections under 35 U.S.C. § 103 of claim 55 over Groten in view of Harmuth, Bühler and Wegmann, claim 56 over Groten in view of Harmuth, Bühler and Rochat, and claim 58 over Groten in view of Harmuth, Bühler and Liechti

Finding of Fact

Wegmann discloses, as a dyestuff component, 2-hydroxy-anthracene-3-carboxylic acid o-toluidide (col. 11, ll. 32-45).³

The Appellants argue, regarding claims 55, 56 and 58, that Wegmann, Rochat and Liechti do not remedy the deficiency in Groten, Harmuth and Bühler as to claim 52 from which claims 55, 56 and 58 directly or indirectly depend (Br. 13-15).

As discussed above regarding the rejection of claim 52, the deficiency argued by the Appellants does not exist. Hence, that argument does not persuade us of reversible error in the rejection of claims 55, 56 and 58.

The Appellants also argue, regarding claim 55, that Wegmann discloses at column 8, lines 40-50 a completely different process than the Appellants' invention (Reply Br. 6).

Unlike the Appellants' claimed process for dyeing and/or printing a nonwoven, Wegmann's process referred to by the Appellants is a process for

³ A discussion of Rochat and Liechti is not necessary to our decision.

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preparing Wegmann's dyestuff, one component of which is the developer component recited in the Appellants' claim 55 (col. 11, ll. 32-45). The Appellants have not established error in the Examiner's argument (Ans. 17) that one of ordinary skill in the art would have used that component in the dyeing methods of Groten, Harmuth and Bühler.

The Appellants argue that "it appears that Wegmann teaches away from 'coupling the dyestuff developer component and the fast color salt and/or the fast color base on the nonwoven' as recited in independent claim 51, upon which claim 55 depends" (Reply Br. 6).

A reference teaches away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the Appellants. *See In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994). The Appellants have not established that Wegmann's disclosure relied upon by the Appellants for making Wegmann's dyestuffs would have led one of ordinary skill in the art in a direction divergent from the path taken by Wegmann or the Appellants.

We therefore are not convinced of reversible error in the rejection of claim 55.

Conclusion of Law

The Appellants have not shown reversible error in the Examiner's determination that the applied references disclose or would have rendered *prima facie* obvious, to one of ordinary skill in the art, each element of the claimed invention.

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DECISION/ORDER

The rejections under 35 U.S.C. § 103 of claims 40-50 over Groten, claims 40-51, 60-62, 69-71 and 82-84 over Groten in view of Harmuth, claims 52-54, 57, 59, 63-68 and 72-81 over Groten in view of Harmuth, Bühler and Kogel, claim 55 over Groten in view of Harmuth, Bühler and Wegmann, claim 56 over Groten in view of Harmuth, Bühler and Rochat, and claim 58 over Groten in view of Harmuth, Bühler and Liechti are affirmed.

It is ordered that the Examiner's decision is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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