UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DOUG SALWAY, JAN L. WILLIAMS,
ANTHONY R. WALDROP and DAN P. GILLIG

Appeal No. 2006-1390
Application No. 10/291,206

ON BRIEF

Before TIMM, JEFFREY T. SMITH and FRANKLIN, Administrative Patent Judges.

FRANKLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1 through 4, 6 through 9, and 38 through 51. Claim 1 is representative of the subject on appeal, and is set forth below:

1. A textile fabric comprising:

a woven fabric having a warp yarn set and a weft yarn set, and in which at least a plurality of the yarns forming the warp yarn set are woven in a leno configuration such that said warp yarns are secured about yarns of said weft yarn set, wherein at least some of the intersections of the warp and weft yarn sets are bonded together, and wherein at least one of said warp and weft yarn sets comprises bicomponent sheath/core elastomeric yarns and said sheath component is melted to bond intersections of the yarns of said warp and weft yarn sets.

Claims 1 through 4, 6 through 8, 38, 39, and 42 through 48 stand rejected under 35 U.S.C. § 103 as being obvious over Dailey in view of Stumpf.

Claims 9, 40, 41, and 49 through 51 stand rejected under 35 U.S.C. § 103 as being obvious over Dailey in view of Stumpf and further in view of Waldrop.

Claims 1 through 4, 6 through 9, and 38 through 51 stand rejected under 35 U.S.C. § 103 as being obvious over Waldrop in view of Stumpf.

The examiner relies upon the following references as evidence of unpatentability:

Waldrop et al. (Waldrop)	5,856,249	Jan. 5, 1999
Dailey et al. (Dailey)	5,985,961	Nov. 16, 1999
Stumpf et al. (Stumpf)	6,059,368	May 9, 2000

We have carefully reviewed the Examiner's Answer, Appellants' Brief and Reply Brief,[1] and the evidence of record. This review has led us to the following determinations.

OPINION

I. The 35 U.S.C. § 103 rejection of claims 1 through 4, 6 through 8, 38, 39, and 42 through 48 as being obvious over Dailey in view of Stumpf

Beginning on page 3 of the Answer, the examiner's basic position is that Dailey suggests appellants' claimed subject matter, but fails to teach the weave structure (leno configuration). The examiner relies upon Stumpf for teaching a leno weave structure (Answer, page 4).

The examiner concludes that it would have been obvious to use the leno weave structure taught by Stumpf for the weave structure in Dailey to produce a fabric that provides sufficient aeration and a smooth seating surface (Answer, page 4).

[1] In making our determinations herein, we carefully considered appellants' arguments as set forth in the Reply Brief. Appellants' arguments in the Reply Brief reiterate positions expressed in the Brief. Appellants additionally note, on page 2 of the Reply Brief, that the examiner's attachment of a copy of Appeal No. 2005-0242 is not relevant. We are aware of this decision and simply note that Waldrop was also applied in a rejection discussed in Appeal No. 2005-0242.

The examiner also concludes that while the percent of open area in the leno weave structure of Stumpf is not specifically disclosed, it would have been obvious to optimize the open area in the leno weave structure to facilitate aeration throughout the fabric while keeping the yarns close enough to provide sufficient support and comfort to the user (Answer, page 4).

On page 5, the examiner states that a heat set leno weave structure would inherently provide resistance to unraveling due to the interlocking structure of the yarns. The examiner also concludes that it would have been obvious to choose a weft yarn with a larger diameter than the warp yarn so that the properties of the weft yarns dominate the texture, appearance, and hand of the overall woven fabric since the weft yarns are made from softer and more aesthetically pleasing yarns (Answer, page 5).

Beginning on page 3 of the Brief, appellants argue that Dailey cannot be properly combined with Stumpf in support of a prima facie case of obviousness. Appellants argue that Stumpf fails to provide a teaching that would have motivated one of ordinary skill in the art to utilize the monofilament disclosed in Dailey in the seating structure disclosed in Stumpf (Brief, page 3). Appellants argue that the seating structure in Stumpf is intended for use as an office chair which would not be subjected to the rigorous ultraviolet radiation exposure of the monofilament described in Dailey. Appellants assert that therefore one of ordinary skill in the art would not have been motivated to look to the art relating to UV resistant monofilaments such as in Dailey (Brief, pages 3 through 4).

Appellants also argue that Dailey does not disclose that the monofilament can be used in a leno weave configuration. Appellants argue that Dailey does not teach the use of a mono or heterofilament to be used as a locking type filament as recited in claim 1. Appellants argue that this deficiency is not overcome by Stumpf. Appellants argue that Stumpf does disclose a leno weave, but Stumpf does not disclose that the monofilaments are bicomponent sheath/core elastomeric yarns, and that the intersections of the monofilament yarns are bonded together via a melted portion of the monofilament (Brief, page 4).

We are not convinced by appellants' arguments for the following reasons.

As pointed out by the examiner, beginning on page 8 of the Answer, the rejection is based upon Dailey in view of Stumpf, and not Stumpf in view of Dailey. The examiner correctly points out that the features appellants argue that are not taught by Stumpf (using a sheath/core bicomponent fiber with UV stabilization in a first direction and heat setting the bicomponent monofilament to secure the woven fabric), are explicitly taught by Dailey, and do not need to be taught by Stumpf. We agree, and note that appellants do not argue the combination of applied references, but attack the references, each individually. We are not persuaded by such arguments. *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). The examiner relies upon Stumpf for teaching the use of a leno weave structure in a woven seat fabric and that such fabrics have an open weave structure which provide the desired support and comfort to the user. The examiner explains that both references are related to seat support structures produced from elastomeric materials, and Stumpf provides a teaching to use leno weaves as the woven structure for a seating support fabric. Answer, page 8. The examiner correctly states that therefore there is sufficient motivation to combine two references and use the leno weave structure disclosed by Stumpf as the weave structure in the woven fabric disclosed by Dailey.

At the bottom of page 4 and the top of page 5 of the Brief, appellants argue that even if Dailey and Stumpf could be properly combined, the resulting combination does not suggest all of the elements recited in the claims. Appellants argue that neither Dailey nor Stumpf suggests a fabric in which the sheath component of a bicomponent sheath/core elastomeric yarn is melted to bond the intersections of the warp yarns and the weft yarns. Appellants argue that while Dailey does disclose a process in which a monofilament containing fabric is heat set so that the multifilament yarn fiber surfaces adhere to the monofilaments, appellants assert that Dailey does not disclose that the heat setting process melts the sheath portion of the disclosed monofilaments. We are not convinced by this argument for the following reasons.

On page 3 of the Answer, the examiner points out that the abstract of Dailey indicates that the sheath has a melting point lower than the core. The examiner also explains that in column 13 at lines 46 through 52, the fabric is heat set to sufficiently adhere the yarn to the monofilament.

Because the sheath has a lower melting point than the core, the logical conclusion is the one made by the examiner, i.e., that the sheath melts and adheres to the monofilament.

In view of the above, we therefore affirm the 35 U.S.C. § 103 rejection of claims 1 through 4, 6 through 8, 38, 39, and 42 through 48.

II. The 35 U.S.C. § 103 rejection of claims 9, 40, 41, and 49 through 51 as being obvious over Dailey in view of Stumpf and further in view of Waldrop

The examiner's position for this rejection is set forth on pages 5 and 6 of the Answer. The examiner relies upon Dailey in view of Stumpf, as discussed above, and further relies on Waldrop for teaching use of a fill yarn comprising air jet textured polyester and that such use provides a fabric with desirable aesthetic and tactile features. Answer, pages 5 and 6. The examiner also relies upon Waldrop for teaching that when the elastomeric component makes up at least 40% by weight of the woven fabric, the fabric has improved retention in strength properties and elastomeric performance (Answer, page 6).

On pages 5 and 6 of the Brief, appellants argue that Waldrop does not disclose or suggest a monofilament which can be used in a leno weave configuration. However, as explained *supra*, the examiner relied upon the combination of Dailey in view of Stumpf for this teaching.

Appellants also argue that Waldrop does not supply motivation to combine the references. Appellants argue that Waldrop does not contain any teaching that would have motivated one of ordinary skill in the art to utilize the fabric disclosed in Waldrop with the monofilament disclosed in Dailey in the seating structure disclosed in Stumpf. Appellants argue that Waldrop is directed to a fabric comprising yarns that are interwoven by a means of a barathea, twill, or dobby weave, whereas Stumpf is directed to a modified leno weave configuration. We are not convinced by this argument for the following reasons.

As pointed out by the examiner on page 9 of the Answer, Waldrop was not relied upon to teach features such as heat setting to bond the warp and weft yarns together. The examiner explains that Dailey teaches this aspect of the invention. The examiner also points out that Waldrop does disclose that the woven seat structure can be made from various weave structures.

The examiner states that hence Waldrop would suggest to one of ordinary skill in the art that various weave structures can be used in a woven seating fabric.

In view of the above, we therefore affirm the 35 U.S.C. § 103 rejection of claims 9, 40, 41, 49, and 50 as being obvious over Dailey in view of Stumpf and further in view of Waldrop.

III. The 35 U.S.C. § 103 rejection of claims 1 through 4, 6 through 9, and 38 through 51 as being obvious over Waldrop in view of Stumpf

The examiner's position for this rejection is set forth on pages 6 through 8 of the Answer, and we incorporate the examiner's position as set forth therein as our own.

Beginning on page 6 of the Brief, appellants argue that there is nothing in Waldrop or Stumpf which would have motivated one of ordinary skill in the art to combine the Waldrop and Stumpf patents in such a way as to arrive at the invention defined by the pending claims. Appellants argue that Waldrop does not contain any teaching that would have motivated one of ordinary skill in the art to utilize the disclosed fabric in Stumpf. We are not convinced by this argument. The examiner has explained the motivation that exists in this combination. The examiner states on page 6 of the Answer that Waldrop fails to use a leno woven fabric as the support fabric for seating. On page 7 of the Answer, the examiner explains that Stumpf teaches the use of a leno weave in a fabric used for seating, and that such a weave facilitates aeration and provides a smooth seating surface, and refers to column 19, lines 19 through 21 of Stumpf. This is sufficient motivation.

On page 7 of the Brief, appellants argue that one of ordinary skill in the art would not have been motivated to heat set the seating structure membrane disclosed in Stumpf. However, as pointed out by the examiner on page 11 of the Answer, Waldrop teaches heat setting and therefore one does not need to provide motivation to heat set the fabric because it is already taught by Waldrop. The examiner relies upon Stumpf for teaching use of a leno weave.

In view of the above, we therefore affirm the 35 U.S.C. § 103 rejection of claims 1 through 4, 6 through 9, and 38 through 51.

V. Conclusion

Each of the art rejections 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) (effective Sep. 13, 2004; 69 Fed. Reg. 49960 (Aug. 12, 2004); 1286 Off. Gaz. Pat. Office 21 (Sep. 7, 2004)).

AFFIRMED

CATHERINE TIMM Administrative Patent Judge	)	
JEFFREY T. SMITH Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
BEVERLY A. FRANKLIN Administrative Patent Judge	)	

BAF:clm

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