

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

Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARY L. DELUCIA

Appeal No. 1997-1135
Application 08/375,196

ON BRIEF

Before PAK, OWENS, and PAWLIKOWSKI, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the examiner's final rejection of claims 1, 3-9, 11-13 and 22-27, which are all of the claims remaining in the application.

THE INVENTION

Appellant's claimed invention is directed toward a method for making a nonwoven fabric. Claim 1 is illustrative:

1. A high strength autogenously bonded nonwoven fabric comprising single polymer conjugate fibers having at least two component compositions, said conjugate fibers having a sheath-core configuration, all of said component compositions consisting essentially of one thermoplastic polymer selected from the group consisting of semicrystalline thermoplastic polymers, crystalline thermoplastic polymers and blends thereof, wherein said component compositions are processed with an identical processing condition or substantially identical processing conditions to form said fibers such that the two component compositions have a melt flow rate difference of equal to or less than about 10 g/10 minute.^[1]

THE REFERENCES

Keuchel et al. (Keuchel)	3,780,149	Dec. 18, 1973
Carey, Jr.	4,551,378	Nov. 5, 1985
Shiba et al. (Shiba)	5,318,552	Jun. 7, 1994

(effective filing date Nov. 10, 1987)

THE REJECTIONS

Claims 1, 3-9, 11-13 and 24-27 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for

¹It appears that "at least" should be inserted before the last appearance of "two component compositions" in this claim.

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failing to particularly point out and distinctly claim the subject matter

which appellant regards as the invention.² Claims 1, 3-9, 11-13 and 22-27 stand rejected under 35 U.S.C. § 103 as being unpatentable over Shiba or Carey, Jr., in view of Keuchel.³

OPINION

We have carefully considered all of the arguments advanced by appellant and the examiner and agree with appellant that the aforementioned rejections are not well founded. Accordingly, we reverse these rejections.

Claim interpretation

Appellant's claims require that the nonwoven fabric comprises "single polymer conjugate fibers". These are "melt-

²In the answer the examiner rejected claims 22 and 23 on the ground that they are indefinite because they depend from canceled claim 21 (answer, page 6). After appellant submitted an amendment (filed October 17, 1996) in response to this new ground of rejection, the examiner did not repeat the rejection in the supplemental answer (page 3). Thus, the record indicates that the examiner has withdrawn this rejection in view of this amendment. See the related remand at the end of this opinion.

³The rejections under 35 U.S.C. § 112, second paragraph, in the final rejection (page 2) are withdrawn in the examiner's answer (page 7).

extruded fibers containing at least first and second components of one polymeric composition or substantially identical polymeric compositions" (specification, page 3, lines 10-13).⁴ "Substantially identical polymeric compositions" are those which "contain the same thermoplastic polymer and different amounts and types of conventional polymer additives that do not significantly alter the chemical and physical properties of the polymer, e.g., pigments, colorants, lubricants, fillers and the like" (specification, page 3, lines 13-19). Appellant's claims recite that the single polymer conjugate fibers have a sheath-core configuration and have at least two component compositions, all of which consist essentially of one thermoplastic polymer selected from semicrystalline thermoplastic polymers, crystalline thermoplastic polymers and blends thereof, and are processed with identical or substantially identical processing conditions. Appellant's specification states that forming the

⁴ It is proper to use the specification to interpret what appellant meant by a word or phrase in the claim. See *In re Morris*, 127 F.3d 1048, 1053-56, 44 USPQ2d 1023, 1027-30 (Fed. Cir. 1997).

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conjugate fibers includes "supplying at least two melt-extrudate streams of a thermoplastic polymer to a sheath-core conjugate fiber forming apparatus" (page 2, lines 7-9).

Accordingly, we interpret appellant's claims as meaning that each component composition is a core or sheath composition, and that there are at least two of these compositions, all of which consist essentially of the recited one thermoplastic polymer and are processed under identical or substantially identical processing conditions.

Rejection under 35 U.S.C. § 112, second paragraph

The relevant inquiry under 35 U.S.C. § 112, second paragraph, is whether the claim language, as it would have been interpreted by one of ordinary skill in the art in light of appellants' specification and the prior art, sets out and circumscribes a particular area with a reasonable degree of precision and particularity. *See In re Moore*, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971).

The examiner argues that "less than about" is indefinite

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because "the true metes and bounds of the claimed limitation cannot be determined" (answer, page 6). As an example, the examiner argues that "less than 2" includes integers above and below 2. *See id.* The examiner has merely stated a conclusion, and has not provided the required explanation as to why the claim language, as it would have been interpreted by one of ordinary skill in the art in light of appellant's specification and the prior art, fails to set out and circumscribe a particular area with a reasonable degree of precision and particularity. Consequently, we reverse the examiner's rejection under 35 U.S.C. § 112, second paragraph.

Rejection under 35 U.S.C. § 103

Shiba discloses "an absorbent article comprising, as the surface material, a non-woven fabric containing 40 wt. % or more of a conjugate fiber made of a first polyester and a second polyester having a melting temperature of 50E C. or more below that of said first polyester and a height of an endothermic peak of 5% or more of the first polyester" (col.

3, lines 54-60).

Carey, Jr. discloses thermally bondable, thermally crimpable, bicomponent fibers which may have a highly eccentric sheath/core configuration and may be formed into a nonwoven fabric (col. 2, lines 16-19 and 52-59; col. 4, lines 7-9). For purposes of thermal bondability, the sheath of the sheath/core configuration must be comprised of a component having a lower melting point than the core (col. 3, lines 16-20). To facilitate processing during thermal crimping and bonding, this melting point temperature difference should be at least 10EC and most preferably at least 30EC (col. 3, lines 25-33).

Keuchel discloses two-component crimped filaments which may have a sheath/core configuration (col. 2, lines 17-20; col. 4, lines 15-20). The filaments are made by a melt spinning process wherein a single polymer is separated into a plurality of streams, each of the streams is subjected to a different thermal and shear environment to change its melt flow or shrinkage characteristics, and the streams then are recombined and passed through a single jet to form an integral

filament (col. 2, lines 24-34). The difference in the thermal histories of the streams produces differences in the shrinkage potentials of the components which cause the filament to coil or crimp (col. 4, lines 3-7).

The examiner argues that Shiba and Carey, Jr. disclose conjugate fibers having identical component compositions (answer, page 3). This argument is not persuasive because the examiner has not explained how components having the same composition can have the different melting points required by both references.

The examiner argues that it would have been obvious to one of ordinary skill in the art, in view of Keuchel, to use similar components in the fibers of Shiba and Carey, Jr. in order to improve the crimp retention and bulk characteristics of the fibers (answer, page 4). Keuchel, however, does not teach that the improved crimp retention and bulk characteristics are the result of using the same starting polymer for forming each stream. Instead, the reference teaches that it is the different thermal histories which produces this improvement (col. 2, lines 24-33; col. 4, lines

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3-7). Appellant's claims, however, require that the components of the fiber are processed using an identical processing condition or substantially identical processing conditions. The examiner points out that appellant's claims encompass use of substantially identical processing conditions (answer, page 7), but has not established that Keuchel's use of different processing conditions to obtain the desired difference in thermal histories falls within the scope of appellant's requirement of an identical processing condition or substantially identical processing conditions. Thus, the examiner has not shown that if the references were combined as proposed by the examiner, appellant's claimed invention would be obtained. See *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1439 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988). The examiner argues that Keuchel was not applied for its disclosure of different processing conditions for the components (answer, pages 7-8), but does not explain why the applied references would have led one of ordinary skill in the art to use Keuchel's single polymer without using the differing processing conditions which, the

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reference teaches, are necessary to obtain the desired properties. Moreover, Shiba and Carey, Jr. both require that the components of the fibers have different melting points in order to obtain the desired properties. Substituting Keuchel's single polymer for the polymers having different melting points, it appears, would render the products produced by Shiba and Carey, Jr. unsuitable for their intended purposes. See *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

For the above reasons, we conclude that the examiner has not carried the burden of establishing a *prima facie* case of obviousness of appellant's claimed invention.

REMAND

In response to the examiner's new ground of rejection of claims 22 and 23 under 35 U.S.C. § 112, second paragraph, as being indefinite due to depending from canceled claim 21 (answer, page 6), appellant submitted an amendment (filed October 17, 1996) wherein claim 22 is amended to depend from claim 9. The examiner does not include claims 22 and 23 in the rejection under 35 U.S.C. § 112, second paragraph, in the

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supplemental answer (page 3). Thus, it appears that the examiner considers this amendment to overcome the rejection and, therefore, has withdrawn the rejection. Appellant's amendment, however, has not been entered. Hence, we remand the application to the examiner for entry of this amendment.

As pointed out by the examiner (answer, page 7), the examiner did not approve entry of appellant's amendment filed on March 11, 1996 (paper no. 15) (advisory action mailed April 2, 1996, paper no. 16). This amendment, however, has been entered. We remand the application to the examiner for withdrawal of the entry of this amendment.

DECISION

The rejections of claims 1, 3-9, 11-13 and 24-27 under 35 U.S.C. § 112, second paragraph, and claims 1, 3-9, 11-13 and 22-27 under 35 U.S.C. § 103 over Shiba or Carey, Jr., in view of Keuchel, are reversed.

REVERSED and REMANDED

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