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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SHUJUN J. WANG, JAYSHREE SETH,
JINGJING MA, MARK A. WOLTERS, VIVEK BHARTI,
and STEPHEN W. BANY

Appeal 2017-005580
Application 14/366,325
Technology Center 1700

Before DONNA M. PRAISS, JEFFREY R. SNAY, and
DEBRA L. DENNETT, *Administrative Patent Judges*.

PRAISS, *Administrative Patent Judge*.

DECISION ON APPEAL¹

This is an appeal under 35 U.S.C. § 134 from the Final Rejection of claims 1–3 and 6–20. App. Br. 3; Ans. 2. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ In our opinion we refer to the Specification (filed June 18, 2014) (“Spec.”), the Final Office Action (entered Apr. 5, 2016) (“Final Act.”), the Appeal Brief (filed Aug. 8, 2016) (“App. Br.”), the Examiner’s Answer (entered Dec. 16, 2016) (“Ans.”), and the Reply Brief (filed Feb. 15, 2017) (“Reply Br.”).

The subject matter of this appeal relates to “pressure sensitive adhesive compositions that contain olefin block copolymers.” Spec. 1:4–5. According to the Specification, pressure sensitive adhesives possess the following properties at room temperature: “(1) aggressive and permanent tack, (2) adherence with no more than finger pressure, (3) sufficient ability to hold onto an adherend, and (4) sufficient cohesive strength to be removed cleanly from the adherend.” *Id.* at 1:13–16. Hot melt adhesives are described in the Specification as “solids at room temperature, but become tacky and flowable at elevated temperatures, and then re-solidify upon cooling.” *Id.* at 1:11–12.

Claim 1 is illustrative below (disputed limitations italicized):

1. A composition blend comprising:
 - at least one olefinic block copolymer wherein the olefinic block copolymer comprises at least one block comprising crystalline ethylene, wherein the at least one block comprising crystalline ethylene comprises less than 30% by weight of the olefinic block copolymer,
 - and wherein the olefinic block copolymer has a density of less than 0.90 g/cm³ (grams cubic centimeter), and a melt temperature of from about 100°C to about 120°C;
 - at least one elastomeric polymer; and*
 - at least one tackifying resin, wherein the blend comprises a hot melt processable pressure sensitive adhesive.*

App. Br. 11 (Claims Appendix).

The Examiner maintains, and Appellant² appeals, the following rejections:

1. Claims 1–3, 7–17, and 19³ stand rejected under 35 U.S.C. § 102(e) as anticipated by Alper;⁴
2. Claim 6 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Alper in view of Quinn;⁵
3. Claim 18 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Alper in view of Aoyama;⁶ and
4. Claim 20 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Alper in view of Müssig.⁷

Appellant argues the rejection of claim 1 and relies on those same arguments with respect to claims 2, 3, and 6–20. App. Br. 3–9. In accordance with 37 C.F.R. § 41.37(c)(1)(iv), and in view of the lack of argument over the subsidiary rejections, claims 2, 3, and 6–20 will stand or fall together with claim 1.

² Appellant is the Applicant, 3M Innovative Properties Company. The real parties in interest are identified in the Appeal Brief as 3M Company and its affiliate 3M Innovative Properties Company. App. Br. 2.

³ Claims 4 and 5 are not included in the rejection because these claims have been cancelled. Final Act. 2.

⁴ Alper et al., US 2011/0021103 A1, published Jan. 27, 2011 (“Alper”).

⁵ Quinn et al., US 6,582,829 B1, issued June 24, 2003 (“Quinn”).

⁶ Aoyama et al., US 2010/0317802 A1, published Dec. 16, 2010 (“Aoyama”).

⁷ Müssig et al., US 2011/0067799 A1, published Mar. 24, 2011 (“Müssig”).

OPINION

The dispositive issue for this appeal is whether the Examiner erred in finding that Alper discloses a pressure sensitive adhesive composition that comprises an elastomeric polymer as required by claim 1.

After review of the arguments and evidence presented by both Appellant and the Examiner, we affirm the stated rejections.

The Examiner finds that Alper discloses the composition required by claim 1 for the reasons stated on pages 2–3 of the Final Office Action.

In the Appeal Brief, Appellant argues that Alper discloses hot melt adhesives and not Appellant’s pressure sensitive adhesives that are hot melt processable. App. Br. 4. According to Appellant, hot melt adhesives are thermoplastics, which means they melt and flow upon heating and upon cooling return to their original state whereas pressure sensitive adhesives are viscoelastic, which means they have viscous flow properties as well as elastomeric (rubber-like) properties. *Id.* at 4–5. Appellant contends that, by definition, a hot melt adhesive is not a pressure sensitive adhesive, therefore, Alper’s compositions are a different class of materials. *Id.* at 5. Appellant asserts that Alper’s polymer blend differs from the claimed blend because Alper combines an olefin block copolymer with a thermoplastic material whereas claim 1 requires a blend of an olefin block copolymer with an elastomer. *Id.* at 6 (quoting Alper ¶ 58, “Any of a variety of well-known and readily available thermoplastic materials can be used as the secondary polymer in the adhesive compositions.”).

Appellant further asserts that the rejection over Alper “misunderstand[s] that the olefin block copolymers (OBC) of Alper are

thermoplastic elastomers.” *Id.* at 7. Appellant contends that Comert⁸ does not evidence that pressure sensitive adhesives and hot melt adhesives are not mutually exclusive, but, rather, “[t]he materials in Comert are thermoplastic elastomers (styrene-isoprene-styrene copolymers)” which Comert describes as pressure sensitive adhesives that can be processed as hot melts, the same as Appellant’s compositions. *Id.* (citing Comert 1:8–12). According to Appellant, thermoplastic elastomeric block copolymers include end blocks that are thermoplastic and mid-blocks that are elastomeric giving them both the properties of a thermoplastic, making them suitable for use in hot melt adhesives, as well as elastomeric properties, making them suitable for use in pressure sensitive adhesives. *Id.* Because it has both features, the component blended with it is said to determine whether it functions as a thermoplastic or an elastomer. *Id.* Appellant concedes that “Alper does include a thermoplastic elastomer as a component” but argues that Alper’s composition is a hot melt adhesive and not a pressure sensitive adhesive because Alper blends a thermoplastic with an OBC thermoplastic elastomer. *Id.*

The Examiner responds that Alper teaches a composition with a degree of pressure sensitivity that can be increased or decreased with the addition of one or more secondary polymers. Ans. 9 (citing Alper ¶ 69). Regarding the different characteristics of hot melt and pressure sensitive adhesives, the Examiner finds such compositions are not mutually exclusive and that pressure sensitive adhesives can be thermoplastic as evidenced by Comert. *Id.* The Examiner also finds that Alper specifies that the secondary thermoplastic material can be acrylonitrile-butadiene-styrene elastomers,

⁸ Comert et al., US 4,725,641, issued Feb. 16, 1988 (“Comert”).

indicating that an elastomer can be thermoplastic. *Id.* at 10 (citing Alper ¶ 59). The Examiner additionally finds the materials recited in Appellant’s claim 7, which recites “wherein the elastomeric polymer comprises a styrene-based block copolymer, a (meth)acrylate based copolymer, or a polyolefin elastomer,” are all disclosed as examples of Alper’s secondary polymer. *Id.* (citing Alper ¶ 59). Finally, the Examiner notes that Alper discloses that pressure is used to bond two substrates together with Alper’s adhesive. *Id.* (citing Alper ¶¶ 44, 45).

In the Reply Brief, Appellant maintains that the “materials” of Alper and the claimed composition are “of different classes” in terms of being hot melt adhesives or pressure sensitive adhesives. Reply Br. 2. According to Appellant, Comert does not disclose thermoplastic materials, but, rather, thermoplastic elastomers which are a “hybrid material” that cannot be “lumped in either with thermoplastic materials or elastomeric materials” although there are thermoplastic elastomers that are “primarily like elastomers.” *Id.* Appellant asserts that the Examiner erred in finding that Alper teaches a pressure sensitive adhesive “because Alper teaches thermoplastic materials and does not teach thermoplastic elastomeric polymers.” *Id.* Regarding Alper’s secondary polymer materials identified by the Examiner, Appellant contends that they “are thermoplastic elastomeric block copolymers which are not elastomers they are hybrid materials.” *Id.* at 3–4.

For the reasons discussed below, Appellant’s arguments fail to identify a reversible error in the Examiner’s claim interpretations and findings as to Alper. *In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011).

We are not persuaded that the Examiner erred in finding that Alper discloses an elastomeric polymer as a secondary polymer for adding to an olefinic block copolymer. Appellant does not dispute that Alper discloses the olefinic block copolymer required by claim 1. Nor does Appellant dispute that Alper teaches the addition of a secondary polymer and tackifying resin. The problem with Appellant's argument that Alper does not teach a pressure sensitive adhesive because Alper's secondary polymer is said to be thermoplastic and not elastomeric (App. Br. 6; Reply Br. 2-4) is that Appellant has not adequately shown the materials identified in Alper's paragraph 59 are not elastomeric. As the Examiner finds, Alper discloses "elastomers" among the secondary polymer in the adhesive composition. Ans. 10; Final Act. 2. This finding is supported by the record. Alper ¶ 59. The Examiner also finds that Alper discloses the same materials that Appellant claims are elastomeric in Appellant's dependent claim 7. Ans. 10; Alper ¶ 59; App. Br. 11 (Claims Appendix). Appellant does not dispute these findings of the Examiner. Essentially, Appellant's sole argument that the secondary polymer materials identified in paragraph 59 of Alper do not teach an elastomeric polymer is that "Alper calls the secondary polymer a thermoplastic." Reply Br. Appellant concedes that "Alper does include a thermoplastic elastomer as a component" (App. Br. 7), but does not adequately explain why a thermoplastic elastomer is not an elastomeric polymer within the meaning of claim 1. Based on the positions of both the Examiner and Appellant, the preponderance of the evidence supports the Examiner's finding that Alper discloses an elastomeric polymer as the secondary polymer in its adhesive composition.

We also are not persuaded that the Examiner erred in finding that Alper discloses a pressure sensitive adhesive composition. According to Appellant, what makes Alper's composition a hot melt adhesive is Alper's title, Alper's statement that the invention relates to hot melt adhesives, Alper's diaper assembly embodiment that does not require a lot of pressure to form the bond, and Alper's statement that the secondary polymer is thermoplastic. App. Br. 4–6. Appellant describes the difference between a thermoplastic elastomeric block copolymer forming a hot melt adhesive and a pressure sensitive adhesive is the blend with either a thermoplastic or an elastomer, respectively. *Id.* at 7. As discussed above, the Examiner's finding that Alper discloses elastomeric polymers as the secondary polymer to add to the olefinic block copolymer is supported by the preponderance of the evidence in the cited record on appeal. Accordingly, the Examiner's finding that Alper discloses a pressure sensitive adhesive composition likewise is supported by the preponderance of the evidence cited in this appeal because Alper discloses adding an elastomeric polymer to the same olefinic block copolymer as Appellant. Moreover, Appellant does not adequately rebut the Examiner's finding that Alper teaches a composition with a degree of pressure sensitivity that can be increased or decreased with the addition of one or more secondary polymers. Ans. 9 (citing Alper ¶ 69).

Based on the cited record on appeal, we are not persuaded of error in the Examiner's rejection of claim 1. Accordingly, we affirm the stated rejections of claims 1–3 and 6–20.

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DECISION

For the foregoing reasons, we affirm all of the Examiner's rejections.

No time period for taking any subsequent action in connection with this Appeal may be extended under 37 C.F.R. § 1.136(a)(1).

AFFIRMED