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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PETER REMMERS, NICHOLAS PORRO, NICHOLAS TAYLOR, and DIRK LAUKIEN

Appeal 2020-000080
Application 14/290,514
Technology Center 1700

Before LINDA M. GAUDETTE, N. WHITNEY WILSON, and BRIAN D. RANGE, *Administrative Patent Judges.*

GAUDETTE, *Administrative Patent Judge.*

DECISION ON APPEAL[1]

The Appellant[2] appeals under 35 U.S.C. § 134(a) from the Examiner's decision finally rejecting claims 10–13, 15, 16, 18, 19, and 21–23.[3]

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[1] This Decision includes citations to the following documents: Specification filed May 29, 2014 ("Spec."); Final Office Action dated March 30, 2018 ("Final"); Appeal Brief ("Appeal Br.") and Claims Appendix ("Claims App.") filed August 6, 2018; Examiner's Answer dated February 11, 2019 ("Ans."); and Reply Brief filed April 11, 2019 ("Reply Br.").

[2] We use the word Appellant to refer to "applicant" as defined in 37 C.F.R. § 1.42. The Appellant identifies the real party in interest as H.B. Fuller Company. Appeal Br. 3.

[3] We have jurisdiction under 35 U.S.C. § 6(b). A telephonic hearing was held on September 24, 2020.

We AFFIRM.

CLAIMED SUBJECT MATTER

Hot-melt pressure sensitive adhesives are adhesives that form a bond, typically at room temperature, when pressure is applied to attach the adhesives to the adhering substrates. Spec. 2:27–3:2. "Pressure sensitive adhesives have a tendency to fuse together at room temperature . . . lead[ing] to agglomeration of the pressure sensitive adhesive during normal handling." *Id.* at 3:2–3. "To prevent hot-melt adhesive compositions from agglomerating prior to their intended use, [the] adhesive compositions are typically provided in a packaged form. Packaged hot-melt adhesives are typically composed of a base polymer, a tackifying agent and a wax component." *Id.* at 2:1–3. According to the Specification, anti-blocking powders used in the discharge of hot-melts to avoid agglomeration tend to become completely absorbed over time by the hot-melt and, as a result, the residual tack reappears. *Id.* at 2:21–23. Agglomeration of packaged hot-melt adhesives may prevent removal of individual forms from a storage container or may prevent an automatic or semi-automatic processing of the individual forms. *Id.* at 2:12–15.

According to the Specification, the present invention provides an improved "packaged hot-melt adhesive compris[ing] a coextrusion coating . . . [that] provides for the anti-blocking properties of the packaged hot-melt adhesive." Spec. 27:7–8. Claim 10, reproduced below, is illustrative of the claimed subject matter:

> 10. A method of providing molten adhesive comprising:
>
> providing a plurality of individual forms of hot melt pressure sensitive adhesive wherein the individual forms of the

hot melt pressure sensitive adhesive are completely covered by a coextrusion coating;

the hot melt pressure sensitive adhesive portion of the individual forms having an average penetration number (PZ), which is between about 20 and about 70, the hot melt pressure sensitive adhesive portion of the individual forms further comprising:

from about 10 wt% to about 60 wt% of a metallocene or single site catalyzed propylene polymer, between about 15 wt% and about 60 wt% of a tackifying agent, and a plasticizer;

conveying the plurality of individual forms to a melting system;

heating the plurality of individual forms until they become a molten adhesive; and

applying the molten adhesive to a substrate.

Claims App. i.

REFERENCES

The Examiner relies on the following prior art as evidence of unpatentability:

Name	Reference	Date
Sayovitz	US 2003/0116259 A1	June 26, 2003
Rodriguez	US 2010/0305259 A1	Dec. 2, 2010
Burgsmueller	US 2013/0143997 A1	June 6, 2013
Podevyn	US 2014/0311872 A1	Oct. 23, 2014

REJECTIONS

1. Claims 10–12, 15, 16, 19, 22, and 23 are rejected under 35 U.S.C. § 103 as unpatentable over Burgsmueller in view of Rodriguez. Final Act. 3.

2. Claim 13 is rejected under 35 U.S.C. § 103 as unpatentable over Burgsmueller in view of Rodriguez and Podevyn. Final Act. 6.

3. Claims 18 and 21 are rejected under 35 U.S.C. § 103 as unpatentable over Burgsmueller in view of Rodriguez and Sayovitz. Final Act. 7.

OPINION

The Examiner found that Burgsmueller discloses or suggests the claim 10 method of providing an adhesive, except that Burgsmueller broadly teaches that the hot-melt pressure-sensitive adhesive comprises a polyolefin such as polypropylene, but does not specifically disclose that the polypropylene is obtained from metallocene catalyst polymerization or single site catalyzed polymerization. Final Act. 3–4 (citing, e.g., Burgsmueller Abstract); *see* Burgsmueller Abstract ("Hot melt adhesive consisting of a core of a pressure sensitive adhesive comprising at least one polymer selected from polyester, polyacrylate, polyolefin, polyurethane, ethylene vinyl acetate polymers, styrene blockcopolymers or mixtures, at least one tackifier and optionally additives"). The Examiner found that Rodriguez discloses metallocene catalyst polymerization-derived propylene copolymer-containing adhesive compositions that are useful in pressure sensitive adhesive applications. Final Act. 4 (citing Rodriguez ¶ 14), 8 (citing Rodriguez ¶ 97). Based on Rodriguez's disclosure, the Examiner determined that the ordinary artisan would have substituted Burgsmueller's polyolefin with a metallocene catalyzed propylene polymer with a reasonable expectation of successful results. *Id.* at 4, 8; *see* Rodriguez ¶ 14 ("In a preferred embodiment, the polyolefin polymer comprises a metallocene catalyst polymerization derived copolymer of propylene and at least one monomer."). As to the "average penetration number (PZ)" of "the hot melt pressure sensitive adhesive portion of the individual forms" (claim

10), the Examiner found that because "Burgsmueller/Rodriguez disclose the same hot melt PSA (metallocene catalyzed propylene adhesive), also in the same form as claimed, and coextruded to have a polymeric shell . . . it would also be expected to have a similar average penetration number as claimed" (Final Act 4–5 (internal citations omitted)).

The Appellant's arguments in support of patentability of all appealed claims are based on claim 10's limitations. *See* Appeal Br. 15. The Appellant argues that Rodriguez does not cure Burgsmueller's deficiencies, i.e., Burgsmueller's failure to teach or suggest providing a hot melt pressure sensitive adhesive comprising a metallocene or single site catalyzed propylene polymer and having a needle penetration number between about 20 and about 70. *See* Appeal Br. 10–11. The Appellant's arguments are not persuasive of reversible error for the reasons explained by the Examiner in the Answer. *See* Ans. 4–13. We add the following primarily to address the arguments in the Reply Brief.

The Appellant contends that the Examiner's statement in the Answer that "it would have been obvious 'to have substituted the polyolefin of Burgsmueller with a specific polyolefin adhesive polymer (propylene obtained from metallocene catalyzation) as taught by Rodriguez'" "reflects a change in the basis of the rejection of claim 10." Reply Br. 4–5 (quoting, with added emphasis, Ans. 7). According to the Appellant, "[p]reviously, the Examiner had taken the position that it would have been obvious to substitute the adhesive of Rodriguez for the adhesive of Burgsmueller." *Id.* at 5 (emphasis in original) (citing Final Act. 3–4). The Appellant makes arguments on pages 8–11 of the Reply Brief that are directed to this alleged new rejection in the Answer.

35 U.S.C. § 132(a) requires that the Director notify the applicant of the rejection of claims, "stating the reasons for such rejection . . . together with such information and references as may be useful in judging the propriety of continuing the prosecution of [the] application." 37 C.F.R. § 1.104(a)(2) states that this notification will be provided in an Office Action. Section 132 and Rule 104 embody the basic concept of procedural due process which requires an applicant at least be informed of the broad statutory basis for rejecting applicant's claims so that applicant may determine what the issues are on which applicant can or should produce evidence. *In re Hughes*, 345 F.2d 184, 185 (CCPA 1965); *cf. In re Kronig*, 539 F.2d 1300, 1302–03 (CCPA 1976) ("[T]he ultimate criterion of whether a rejection is considered 'new' in a decision by the [B]oard is whether [applicants] have had fair opportunity to react to the thrust of the rejection.").

We appreciate that the Examiner's terminology in the Final Office Action may have been imprecise in that the Examiner referred to "substitut[ing] the polyolefin *adhesive* of Burgsmueller with the propylene *adhesive* of Rodriguez" Final Act. 4 (emphasis added). Nonetheless, we are not convinced that the Appellant was not fully apprised that the Examiner's rejection was based on substituting Burgsmueller's polyolefin *polymer* with Rodriguez's *polymer*, and that the Appellant had a fair opportunity to respond to this proposed substitution in the Appeal Brief. As the Appellant acknowledges in the Appeal Brief,

> [t]he Examiner states in the Office Action dated 3/30/2018, page 8 in reference to Appellants arguments regarding Rodriguez et al. teaching very different compositions as compared to the compositions of Appellant[']s method of claim

> 10, that "This argument is not persuasive. The examiner is not substituting the entire composition of Burgsmueller et al. with that of Rodriguez et al. Instead, the Examiner is merely substituting *the polymer* of Burgsmueller with that of Rodriguez."

Appeal Brief 14 (emphasis added). Given the Examiner's explicit statement in the Final Office Action that the rejection is based on substitution of only the polymer component of Burgsmueller's composition with the polymer component of Rodriguez's composition, and the Appellant's acknowledgement of that statement in the Appeal Brief, we are not persuaded that the Examiner advanced a new rejection in the Answer, or that the Appellant was not adequately informed of the basis of the Examiner's rejection prior to the Answer.

An appellant must identify the Examiner's error in the Appeal Brief so that the Examiner has a fair opportunity to respond in the Answer. *Cf. Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential) ("Our decision is limited to the finding[s] before us for review. . . . [T]he Board's primary role is to review adverse decisions of examiners including the findings and conclusions made by the examiner."). Accordingly, "[a]ny argument raised in the reply brief which was not raised in the appeal brief, or is not responsive to an argument raised in the examiner's answer . . . will not be considered by the Board . . . unless good cause is shown." 37 C.F.R. § 41.41(b)(2) (2017). Because we are not persuaded that the Examiner made a new argument or raised a new ground of rejection in the Answer, we decline to consider the Appellant's arguments advanced for the first time in Reply Brief pages 8–11.

The Appellant continues to assert that neither Burgsmueller nor Rodriguez discloses that penetration number (PZ) is an important property for a hot melt pressure sensitive adhesive, and neither reference "teaches or suggests how to formulate a hot melt pressure sensitive adhesive such that it exhibits a PZ between about 20 and about 70" as claimed. Reply Br. 5–6; *see* Appeal Br. 10–11. According to the Appellant, "[t]he Examiner speculates that by picking and choosing from the Burgsmueller et al. disclosure and the Rodriguez et al. disclosure the skilled artisan could arrive at a film-covered form that includes a metallocene or single site catalyzed propylene and exhibits the requisite PZ value," but "this is not the proper test for inherency. Inherency is only present when the limitation at issue is the natural result of the combination of prior art elements." Reply Br. 6 (citations and internal quotation marks omitted).

We first address the Appellant's contention that the Examiner engaged in improper hindsight in determining that the applied prior art suggests providing a hot melt pressure sensitive adhesive portion as claimed. Burgsmueller discloses that "[m]any thermoplastic synthetic polymers can be used in appropriate pressure sensitive materials. These polymers can be blended with other ingredients such as *plasticizer*, *tackifier*, oils and other additives, to form a pressure sensitive adhesive." Burgsmueller ¶ 18 (emphasis added). Burgsmueller explicitly identifies "polyolefins, such as polyethylene, polypropylene and copolymers" as suitable for use as the thermoplastic polymer of the adhesive composition. *Id.* ¶ 19. Burgsmueller claims a pressure sensitive adhesive material comprising "(i) a polyester, polyacrylate, *polyolefin*, polyurethane, ethylene vinyl acetate polymers, styrene block copolymers or mixtures thereof, *and* (ii) a *tackifier*" *Id.* ¶ 45

(claim 1). Burgsmueller states that "[t]he adhesive composition comprises an amount of [tackifying] resin between 10 to 60% by weight (related to the adhesive material of the core)." *Id.* ¶ 24. Although, plasticizer is identified as an optional component, Burgsmueller discloses that "plasticizer is preferably used for viscosity adjustment and is comprised in the adhesive material in an amount of 0 to 25 wt.-%, preferably 5 to 20 wt.-%." *Id.* ¶ 25. Rodriguez explicitly identifies "a metallocene catalyst polymerization derived copolymer of propylene and at least one monomer" (¶ 14) as the polymer in a polyolefin adhesive composition (*id.* ¶ 2). Given these disclosures, we are not persuaded that the Examiner erred in determining that the prior art provides direction to provide a hot melt pressure sensitive adhesive portion as claimed. *See In re O'Farrell*, 853 F.2d 894, 903 (Fed. Cir. 1988) (explaining that an invention is "obvious to try" "where the prior art [gives] either no indication of which parameters [are] critical or no direction as to which of many possible choices is likely to be successful."); *Merck & Co. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989) ("Disclos[ure of] a multitude of effective combinations does not render any particular formulation less obvious.").

We turn next to the Appellant's contention that the claimed PZ value would not have been an inherent property in the Burgsmueller-Rodriguez adhesive composition. The Specification discloses that an "object of the present invention is to provide packaged hot-melt adhesives which exhibit a low content of plasticizer to maintain an adhesive composition (a) which exhibits an increased hardness." Spec. 5:13–15. Hardness is a measure of an adhesive's structural resistance, and a specific material's hardness "is obtained by allowing a weighted needle of specified dimensions to penetrate

into the material under specific test conditions, e.g. at a defined temperature. The penetration number (PZ) is usually recorded as the number of units of depth which the needle penetrates in a given time." Spec. 21:20–26; *see also* Spec. 49:26–27 ("The penetration number indicates the hardness of the polymer composition."). The Specification discloses that "the packaged hot-melt adhesive has an average penetration number (PZ), which is between about 5 and about 200 . . . and most preferably between about 20 and about 70." *Id.* at 22:4–7.

As found by the Examiner (Final Act. 3–4), Burgsmueller's hot melt adhesive composition, as modified to substitute the polyolefin component with Rodriguez's propylene obtained from metallocene catalyzation, includes the same components as claimed in overlapping amounts. *Compare* Burgsmueller ¶ 24 (10–60 wt.% tackifying agent), ¶ 25 (0–25 wt.%, preferably 5 to 20 wt.% plasticizer), Final Act. 4 (calculating the metallocene propylene polymer content as 50% when tackifier content is 40% and plasticizer content is 10%), *with* claim 10 (about 10 wt% to about 60 wt% metallocene catalyzed propylene polymer, between about 15 wt% and 60 wt% tackifying agent, and a plasticizer). The claims do not specify the plasticizer amount. However, the Specification's disclosure that "the amount of plasticizer in the hot-melt pressure sensitive adhesive composition (a) [preferably] is less than about 30 wt% referring to the total weight of the packaged hot-melt adhesive, . . . and most preferably less than about 5 wt%" (Spec. 24:18–21), and that plasticizer content effects hardness (*id.* at 5:13–15), suggests that the Burgsmueller-Rodriguez adhesive composition, which contains at most 25 wt% plasticizer, would be expected to exhibit the same needle penetration number as the claimed composition. *See In re Kubin*, 561

F.3d 1351, 1357 (Fed. Cir. 2009) ("Even if no prior art of record explicitly discusses the . . . [limitation], [Appellant's] application itself instructs that [the limitation] is not an additional requirement imposed by the claims on the [claimed invention], but rather a property necessarily present in [the claimed invention]."); *Ex parte Obiaya*, 227 USPQ 58, 60 (BPAI 1985) ("The fact that appellant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the difference would otherwise have been obvious."); *cf. In re Cruciferous Sprout Litig.,* 301 F.3d 1343, 1349 (Fed. Cir. 2002) (citations omitted) ("Inherency is not necessarily coterminous with the knowledge of those of ordinary skill in the art. Artisans of ordinary skill may not recognize the inherent characteristics or functioning of the prior art."); *Titanium Metals Corp. v. Banner*, 778 F.2d 775 (Fed. Cir. 1985) (finding claimed corrosion-resistant property was inherent in a prior art titanium alloy falling within the claimed ranges even though the prior art did not disclose this property).

"[W]hen the prior art evidence reasonably allows the PTO to conclude that a claimed feature is present in the prior art, the evidence 'compels such a conclusion if the applicant produces no evidence or argument to rebut it.'" *In re Crish*, 393 F.3d 1253, 1259 (Fed. Cir. 2004) (quoting *In re Spada*, 911 F.2d 705, 708 n.3 (Fed. Cir. 1990)); *see also In re Peterson*, 315 F.3d 1325, 1330 (Fed. Cir. 2003) ("[T]he existence of overlapping or encompassing ranges shifts the burden to the applicant to show that his invention would not have been obvious."). The Appellant has not provided persuasive argument or evidence to meet its burden to show that the Burgsmueller-Rodriguez

adhesive composition would not have possessed a penetration number within the claimed range.

The Appellant also argues that the Examiner did not interpret claim 10 correctly and, as a result, erred in finding that "the hot melt pressure sensitive adhesive portion of the individual forms" (claim 10) resulting from the combined teachings of Burgsmueller and Rodriguez necessarily would have "an average penetration number (PZ) . . . between about 20 and about 70" (*id.*). Reply Br. 7. The Appellant argues that "the Examiner's inherency analysis concludes with the assertion that the film-covered hot melt pressure sensitive adhesive form that allegedly results from the proposed combination of Burgsmueller et al. and Rodriguez et al. would inherently exhibit the PZ property set forth in claim 10," however, "it is not the film covered form that exhibits the PZ property; rather, it is the hot melt pressure sensitive adhesive that must exhibit this property." Reply Br. 7.

Even if the Appellant is correct in stating that the Examiner's finding as to the average penetration number is based on an erroneous interpretation of claim 10, the Appellant has not persuaded us of reversible error in the Examiner's rejection because the Examiner found that Burgsmueller, as modified by Rodriguez, discloses or suggests the same hot melt pressure sensitive adhesive in the same form as claimed. *See* Final Act. 4–5.

Any additional arguments made by the Appellant, but not discussed in this Decision, have been addressed by the Examiner and are unpersuasive based on the fact finding and reasoning stated in the Answer and the Final Office Action.

CONCLUSION

The Appellant has not identified reversible error in the Examiner's conclusion of obviousness. Accordingly, we sustain all three grounds of rejection.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
10–12, 15, 16, 19, 22, 23	103	Burgsmueller, Rodriguez	10–12, 15, 16, 19, 22, 23	
13	103	Burgsmueller, Rodriguez, Podevyn	13	
18, 21	103	Burgsmueller, Rodriguez, Sayovitz	18, 21	
Overall Outcome:			10–13, 15, 16, 18, 19, 21–23	

TIME PERIOD FOR RESPONSE

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