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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte CARMEN-ELENA CIMPEANU, CORNELIS PETRUS BEYERS, ANDREE DRAGON, JOSE MARIA TORRES LLOSA, ERIKA FLAMING, and UWE WERNZ

Appeal 2014-009721
Application 13/220,029
Technology Center 1700

Before CATHERINE Q. TIMM, BEVERLY A. FRANKLIN, and ELIZABETH M. ROESEL, *Administrative Patent Judges*.

ROESEL, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants[1] appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1–13, 15, 16, 18, and 19. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] BASF SE is identified as the real party in interest. App. Br. 2.

STATEMENT OF THE CASE

Claimed Invention

Appellants claim a method for adhesively bonding labels to a substrate and subsequently detaching the labels. App. Br. Appendix i (claim 1).[2] The method is useful for reusable beverage containers, such as beer, water, or soda bottles, which undergo a washing operation to remove labels before being refilled and relabeled for reuse. Spec. 1:10–13.

Claim 1 is illustrative of the subject matter on appeal and is reproduced below from Appellants' Claims Appendix:

> 1. A method for adhesively bonding labels to a substrate and subsequently detaching the labels, where
>
> a radiation-crosslinkable pressure-sensitive adhesive is applied to the label or to the substrate,
>
> label and substrate are brought together and bonded to one another,
>
> the pressure-sensitive adhesive is crosslinked prior to bonding by irradiation with a radiation dose of 6 to 18 mJ/cm^2, and
>
> the label is then detached from the substrate with basic, aqueous wash liquid at a temperature greater than 25°C, wherein
>
> the pressure-sensitive adhesive comprises at least one radiation-crosslinkable polymer which prior to crosslinking has a glass transition temperature of less than or equal to -40°C.

App. Br. Appendix i.

[2] Appeal Brief filed April 11, 2014.

References

Fairchild	US 4,434,069	Feb. 28, 1984
Schumacher et al.	DE 10310889 A1	Sept. 23, 2004[3]

Rejection

Claims 1–13, 15, 16, 18, and 19 are rejected under 35 U.S.C. § 103(a) as unpatentable over Fairchild in view of Schumacher. Non-Final Action 2–6.[4]

ANALYSIS

We confine our discussion to claims 1, 3, 11, 12, 16, and 19, which are addressed under separate headings in the Appeal Brief. App. Br. 3–8. Dependent claims 4–10, 13, 15, and 18 are not separately argued, and they stand or fall with claim 1.

The Examiner determines that the method of claims 1–13, 15, 16, 18, and 19 is an obvious combination of the methods disclosed in Fairchild and Schumacher. Non-Final Action 2–6. More specifically, the Examiner finds that Fairchild teaches a method of removing a label from a plastic beverage container using basic aqueous wash at elevated temperature. Non-Final Action 2–3. The Examiner finds that Schumacher discloses a method for adhesively bonding labels to a substrate using a radiation-crosslinkable pressure-sensitive adhesive. *Id.* at 3. The Examiner concludes that it would have been obvious to modify the label-removing method of Fairchild by

[3] We cite to an English machine translation made of record December 11, 2012 ("Schumacher") for paragraphs 1–111 and to the German original ("Schumacher [original]") for tabular information in Examples 1–3 that was not translated.

[4] Non-Final Action dated February 12, 2014.

using the radiation-crosslinkable pressure-sensitive adhesive and labeling method of Schumacher. *Id.*

We are not persuaded that Appellants identify reversible error in the Examiner's rejection. We sustain the rejection of the appealed claims for the reasons expressed in the Non-Final Action, the Answer, and below.

Claim 1

Appellants argue that a person of ordinary skill in the art would not have combined Fairchild and Schumacher, and even if combined, the result would not be the method of claim 1. App. Br. 6–7. Appellants additionally argue that comparative data in the Specification shows the significance of the glass transition temperature (Tg) and radiation dose limitations of claim 1. *Id.* at 5.

We are not persuaded that the Examiner errs in combining the teachings of Fairchild and Schumacher. The Examiner finds that a person of ordinary skill in the art would have combined Fairchild's label-removal method with Schumacher's method for adhesively bonding labels to a substrate "in order to achieve good adhesion and cohesion and to improve the thermal stability of the label bonded to the substrate." Non-Final Action 3. Appellants do not dispute the Examiner's finding that improved adhesion and thermal stability "are desirable characteristics of a bond between a label and a bottle to ensure the label is not removed during the packaging, shipping, and use of the bottle by the consumer." Answer 7. Nor do Appellants dispute the Examiner's finding that it is "desirable to remove labels from bottles so that the bottles can be recycled and reused," as taught by Fairchild. *Id.* The Examiner's findings, as set forth in the Non-Final Action and the Answer, are sufficient to establish a reason that would have

prompted a person of ordinary skill in the art to combine the label-removal method of Fairchild and with the label-bonding method of Schumacher. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

Appellants rely on Schumacher's objective of improved cohesion and adhesion, Schumacher ¶ 9, to argue that a person of ordinary skill in the art would not have combined Schumacher with Fairchild. App. Br. 6–7; Reply Br. 2–4. Notwithstanding Appellants' arguments, the evidence cited by the Examiner is sufficient to show that a person of ordinary skill in the art would have had a reasonable expectation of success in combining Fairchild's label-removal method with Schumacher's label-bonding method. On this record, the evidence shows sufficiently that washing with an aqueous basic solution at elevated temperature, as disclosed in Fairchild, would have been expected to remove labels bonded with Schumacher's radiation-crosslinkable pressure-sensitive adhesives. Fairchild discloses that an aqueous basic solution "removes most paper labels from containers," with no hint that such a solution would not work with any particular labels or adhesives. Fairchild 3:3–4. Schumacher discloses paper labels having improved adhesion and cohesion, Schumacher ¶¶ 9, 92–95, 101, and is silent as to whether or not the labels can be removed using an aqueous basic solution at elevated temperature. Schumacher's labels made with radiation-crosslinkable pressure-sensitive adhesives are not taught as being permanently adhered to a substrate. In fact, Schumacher teaches that protective foils containing the same radiation-crosslinkable pressure-sensitive adhesives "can be removed . . . without residue by hand." Schumacher ¶ 99.

Appellants do not identify error in the Examiner's finding that the combination of Fairchild and Schumacher teaches the method of claim 1.

Schumacher discloses crosslinking pressure-sensitive adhesives with a radiation dose of 10 to 1500 mJ/cm^2—a range that overlaps the recited range of 6 to 18 mJ/cm^2. *Compare* Schumacher ¶ 97 *with* App. Br. Appendix i (claim 1). Appellants argue that a person of ordinary skill in the art would have been guided by Schumacher's examples to select a radiation dose above claim 1's upper limit in order to obtain improved cohesion and adhesion, as desired by Schumacher. App. Br. 7; Reply Br. 4. We are not persuaded by Appellants' argument. Schumacher's disclosure of specific examples outside Appellants' claimed range is not controlling. *Merck & Co., Inc. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989) ("in a section 103 inquiry, 'the fact that a specific [embodiment] is taught to be preferred is not controlling, since all disclosures of the prior art, including unpreferred embodiments, must be considered'") (quoting *In re Lamberti*, 545 F.2d 747, 750 (CCPA 1976)). Schumacher's disclosure of a radiation dose range that overlaps the range recited in claim 1 is sufficient to establish prima facie obviousness, which has not been rebutted by Appellants. *In re Peterson*, 315 F.3d 1325, 1329 (Fed. Cir. 2003) ("even a slight overlap in range establishes a *prima facie* case of obviousness"); *In re Geisler*, 116 F.3d 1465, 1469, 1470 (Fed. Cir. 1997) (when a prior art reference discloses a range that overlaps the range recited in the claim, the burden is on applicant to rebut prima facie obviousness, *e.g.,* by showing unexpected properties within the claimed range).

We are not persuaded by Appellants' attempt to show unexpected results for the recited ranges of glass transition temperature (Tg) and radiation dose. App. Br. 5; Reply Br. 5–6. Appellants do not dispute the Examiner's finding that the comparative data relied upon by Appellants

relate to one embodiment and is not commensurate with the scope of claim 1. Ans. 8–9. *In re Clemens*, 622 F.2d 1029, 1035 (CCPA 1980) ("In order to establish unexpected results for a claimed invention, objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support.") Furthermore, Appellants do not direct us to evidence sufficient to show unpredictability of the effect of either glass transition temperature (Tg) or cross-linking radiation dose on label-detachability. In fact, Appellants' arguments imply that a person of ordinary skill in the art would have understood that higher radiation doses provide stronger adhesion (lower detachability) and that lower radiation doses provide weaker adhesion (higher detachability). App. Br. 7 (arguing that to attain improved cohesion and adhesion, one of ordinary skill in the art would have selected a radiation dose above 18 mJ/cm^2). *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1371 (Fed. Cir. 2007) ("any superior property must be unexpected to be considered as evidence of non-obviousness").

Claims 3 and 19

Claims 3 and 19 each depends from claim 1. Claim 3 recites that "the radiation dose is from 3 to 15 J/g." Claim 19 recites that "the radiation dose is from 4 to 13 J/g." App. Br. Appendix i, iv. As support for claims 3 and 19, Appellants direct us to the Specification at page 8, line 6, which discloses: "The ratio of radiation dose to application rate is preferably from 3 to 15 J/g or from 4 to 13 J/g." *See* App. Br. 7.

The Examiner finds that Schumacher discloses a range of radiation doses and examples of application rates of 5 g/m^2 and 20 g/m^2. Non-Final Action 4. The Examiner concludes that, in view of these disclosures, it would it would have been obvious to optimize the radiation dose and the

application rate in order to ensure that a sufficient amount of crosslinking has occurred. *Id.*; Ans. 3–4.

Appellants argue that the prior art does not recognize the ratio of radiation dose to application rate as a result-effective variable. App. Br. 7–8; Reply Br. 7.

We are not persuaded that Appellants identify reversible error in the Examiner's rejection. Schumacher discloses Examples 1–3 with application rates of 60 g/m^2, 20 g/m^2, and 5 g/m^2, respectively. Schumacher [original] at 7–8. In view of these disclosures, the Examiner correctly finds that application rate is taught as a result-effective variable for creating a bond without wasting adhesive. Non-Final Action 4; Ans. 3–4, 9–10. Schumacher discloses a radiation dose range of 10 to 1500 mJ/cm^2 and Examples 1–3 with radiation doses of 30 mJ/cm^2, 20 mJ/cm^2, and 40 mJ/cm^2, respectively. Schumacher ¶ 97; Schumacher [original] at 7–8. In view of these disclosures, the Examiner correctly finds that radiation dose is taught as a result-effective variable for providing sufficient cross-linking to form a strong bond without damaging the adhesive or materials being bonded. Non-Final Action 4; Ans. 10.

On this record, the evidence is sufficient to establish that radiation dose and application rate are each known in the art as result-effective variables. Appellants do not persuade us that a person of ordinary skill in the art would not have been able to optimize each of these variables consistent with the range and examples disclosed in Schumacher. Nor do Appellants persuade us that optimization of these variables would not have resulted a ratio of radiation dose to application rate within the ranges recited in claims 3 and 19. *In re Applied Materials, Inc.*, 692 F.3d 1289, 1297 (Fed.

Cir. 2012) (affirming obviousness rejection where "there was no indication that obtaining the claimed dimensions was beyond the capabilities of one of ordinary skill in the art or produced any unexpectedly beneficial properties").

For the first time in the Reply Brief, Appellants rely on data in Table 1 of the Specification in attempt to argue unexpected results for claims 3 and 19. *Compare* App. Br. 7–8, *with* Reply Br. 7. That argument is untimely and will not be considered. 37 C.F.R. § 41.41(b)(2); *Ex parte Nakashima*, No. 2009-001280, 2010 WL 191183, *1 (BPAI Jan. 7, 2010) (informative).

Claim 11

Appellants do not identify error in the Examiner's findings that Schumacher discloses a label containing a backing material, where the backing material is paper. Non-Final Action 5 (citing Schumacher ¶ 95); App. Br. Appendix iii (claim 11). The Examiner's finding is supported by Schumacher, which discloses a carrier, such as paper or plastic film, to which an adhesive layer is applied to form a self-adhesive article, such as a label, adhesive tape, adhesive film, or protector. Schumacher ¶¶ 92–95. The reference does not support Appellants' argument that the carrier is disclosed as a protector or that the carrier is removed before the adhesive is used to bond two surfaces. Reply Br. 7–8. Schumacher's "protector" or "protective foil" comprises both a carrier and an adhesive layer and is applied to an item to protect it during shipping or storage. Schumacher ¶¶ 92, 93, 99.

Claims 12 and 16

The Appeal Brief merely recites the limitations of claims 12 and 16 and asserts that they are not disclosed or suggested by the applied prior art.

App. Br. 8. Appellants' submission is not sufficient to require us to consider separate patentability of either claim 12 or claim 16. *In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) ("a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art" is not a substantive argument that requires claims be separately addressed).

CONCLUSION OF LAW AND DECISION

The decision of the Examiner rejecting claims 1–13, 15, 16, 18, and 19 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) (1).

AFFIRMED