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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/124,096	02/04/2014	Stefanie Von Thaden	3321-P50095	9394
13897	7590	11/18/2019	EXAMINER	
Abel Schillinger, LLP 8911 N. Capital of Texas Hwy Bldg 4, Suite 4200 Austin, TX 78759			CHUI, MEI PING	
			ART UNIT	PAPER NUMBER
			1616	
			NOTIFICATION DATE	DELIVERY MODE
			11/18/2019	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte STEFANIE VON THADEN and MANUELA KOEHLER

Appeal 2018-007435
Application 14/124,096
Technology Center 1600

Before DONALD E. ADAMS, TAWEN CHANG, and
MICHAEL A. VALEK, *Administrative Patent Judges*.

VALEK, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant¹ submits this appeal under 35 U.S.C. § 134(a) involving claims to a water-resistant cosmetic or dermatological photoprotective preparation. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies Beiersdorf AG as the real party in interest. Appeal Br. 3. Herein, we refer to the Final Action mailed June 27, 2017 (“Final Act.”); Appellant’s Appeal Brief filed January 24, 2018 (“Appeal Br.”); Examiner’s Answer mailed May 17, 2018 (“Ans.”); and Appellant’s Reply Brief filed July 13, 2018 (“Reply Br.”).

STATEMENT OF THE CASE

“The invention relates to water-resistant cosmetic or dermatological photoprotective preparations with improved water resistance on account of the addition or replacement of customary emulsifiers by polyglycerol-10 stearate.” Spec. 1.

Claims 34–53 are on appeal and can be found in the Claims Appendix of the Appeal Brief. Claim 34 is independent and begins as follows:

34. A water-resistant cosmetic or dermatological photoprotective preparation, wherein the preparation comprises polyglyceryl-10 stearate in a concentration of less than 6% by weight, based on a total weight of the preparation, one or more UV filter substances, and no lecithins, and wherein the preparation is stable for a period of at least 3 years at room temperature and for at least 6 months when stored at 40°C, O/W emulsion preparations of the following compositions I to IV being excluded:

Appeal Br. 22. Claim 34 concludes with a set of tables reciting the particular components of excluded compositions I to IV. Independent claim 47 is similar to claim 34, but further recites that “the preparation is present in the form of a past, ointment, gel or cream.” *Id.* at 26. Dependent claims 35, 36, and 48 depend from claims 34 and 47 and further require the presence of “one or more film formers” in the claimed preparation.

Claim 52 is also independent and reads as follows:

52. A water-resistant cosmetic or dermatological photoprotective preparation, wherein the preparation is a hydrodispersion and comprises polyglyceryl-10 stearate in a concentration of less than 6% by weight, based on a total weight of the preparation, one or more UV filter substances, and no lecithins.

Id. at 28.

Appellant seeks review of the following rejections:

- I. Claims 34, 37–43, and 45 under 35 U.S.C. § 103 as unpatentable over Choi²; and
- II. Claims 34–53 under 35 U.S.C. § 103 as unpatentable over Choi, Knuppel,³ and De La Poterie.⁴

Appeal Br. 10–20.

The issue for each of these rejections is: Does the preponderance of evidence of record support Examiner’s conclusion that the cited prior art renders the claimed preparations obvious?

Findings of Fact

FF1. According to Choi, “UV blocking products are generally prepared in the form of cream or lotion and can be classified, according to the composition of the inner phase and outer phase of emulsion, into W/O type (water-in-oil) and O/W type (oil-in-water).” Choi 2.

FF2. Choi teaches a UV-blocking W/O (water-in-oil) or O/W (oil-in-water) emulsion containing, *inter alia*, an “emulsifying agent” and a “UV-blocking agent.” Choi. 3–4. Choi teaches that “polyglyceryl-10 stearate” may be used as the emulsifying agent in such compositions “in an amount of 0.01–10 wt% based on the total weight of the composition.” *Id.* at 6–7. Choi explains,

If the content of the emulsifying agent in the composition is less than 0.01 wt%, an emulsion will not be formed or the stability of the composition will be poor, and if the content of the

² Choi et al., CA 2718712 A1, published Sept. 24, 2009 (“Choi”).

³ Knuppel et al., US 2002/0155072 A1, published Oct. 24, 2002 (“Knuppel”).

⁴ De La Poterie et al., US 6,464,969 B2, issued Oct. 15, 2002 (“De La Poterie”).

emulsifying agent is more than 10 wt%, the composition will be sticky and can give out an offensive odor due to the emulsifying agent.

Id.

FF3. Choi teaches that these emulsions are impregnated “into expanded urethane foam, thereby completing a cosmetic product that ensures product stability, is convenient to use and carry, maintains the UV-blocking effect for a long time, eliminates the need to wash an applying hand, and has a skin-cooling effect.” Choi 3.

FF4. Knuppel teaches the “[u]se of film-forming, water-soluble or water-dispersible polyurethanes for improving the water resistance of cosmetic or dermatological formulations” and “in particular to cosmetic and dermatological light protection formulations.” Knuppel, Abstr., ¶ 1.

According to Knuppel, “[m]ost sunscreens are applied in the vicinity of water or during sporting activity (perspiration),” and thus, “particular importance is to be attributed to the water resistance of such formulations.”

Id. ¶ 10. Knuppel teaches that the “use of film-forming . . . polyurethanes . . . improv[es] the water resistance of cosmetic or dermatological formulations comprising at least one customary UV filter substance.” *Id.* ¶ 16.

FF5. Knuppel teaches that compositions comprising a film-forming polyurethane can be formulated as W/O or O/W emulsions or as a hydrodispersion. Knuppel ¶ 121. Knuppel explains that such preparations can be used “as skin protection cream, cleansing milk, sunscreen lotion, nourishing cream, day cream or night cream etc.” *Id.* ¶ 59.

FF6. De La Poterie also teaches cosmetic compositions, including “anti-sun” compositions, comprising “at least one hydrophobic film-forming polymer.” De La Poterie, 1:22–23, 2:24–25. De La Poterie identifies

“polyvinylpyrrolidone (PVP)” as one example of a film-forming polymer. *Id.* at 13:33–35; *see also id.* at 5:55–60. According to De La Poterie, the film-forming polymer provides “good resistance to cold water.” *See id.* at 2:1–9.

Analysis

I. Rejection of claims 34, 37–43, and 45 over Choi

Examiner finds Choi “teaches a composition, which may comprise polyglyceryl-10-stearate component and an UV-blocking substance” in an overlapping amount and “does not teach lecithin must present” “and does not teach the inclusion of compositions I, II, II and IV.” Final 4–6.

Examiner notes that the “water-resistant” and stability requirements of claim 34 are not expressly taught in Choi, but determines those limitations would be inherent because “a chemical composition and its properties are inseparable” and Choi teaches the same composition as in claim 34. *See id.* 5–6.

Appellant argues Choi teaches that its emulsions “are intended to be used exclusively in impregnated form” (i.e., impregnated in expanded urethane foam) and “suggests that the emulsions disclosed therein are not stable enough for them to be used in unimpregnated form.” Appeal Br. 13–15. Thus, urges Appellant, Choi “fails to teach or suggest that by using one specific compound among the many compounds of most diverse structures mentioned in CHOI as examples of suitable emulsifiers, i.e., polyglycerol-10 stearate, in a concentration of less than 6% by weight, the emulsions disclosed therein would be stable also as such.” *Id.* at 15. Appellant also argues that Choi fails to teach “that the emulsions disclosed therein are water-resistant, nor does CHOI teach or suggest how they can be made

water-resistant.” *Id.* at 16.

We are not persuaded by Appellant’s arguments and agree with Examiner’s statement of the rejection and responses to Appellant’s arguments in the Answer and Final Action, which we adopt and incorporate by reference. We further address Appellant’s arguments below.

We are not persuaded by Appellant’s arguments regarding the stability limitation. Choi teaches O/W and W/O emulsions comprising the same ingredients as the preparation in claim 34. FF2. That polyglyceryl-10 stearate is one of several dozen emulsifying agents listed in Choi, does not change the fact that Choi teaches embodiments comprising polyglyceryl-10 stearate and a UV-blocking agent. *See Merck & Co., Inc. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989) (explaining that a reference’s disclosure of “a multitude of effective combinations does not render any particular formulation less obvious”). Moreover, Choi teaches a range for the amount of polyglycerol-10 stearate (i.e., 0.01–10 wt%) that substantially overlaps with the claimed range (i.e., less than 6%). FF2. That overlap is sufficient to establish a prima facie showing for that concentration limitation, which Appellant has not sought to overcome. *See In re Peterson*, 315 F.3d 1325, 1329 (Fed. Cir. 2003) (“[W]e and our predecessor court have consistently held that even a slight overlap in range establishes a prima facie case of obviousness.”). For these reasons, Examiner has shown a “sufficiently close relationship” exists between the structure of the preparation in claim 34 and the emulsions taught in Choi to “‘create an expectation’ . . . that the new compound will have ‘similar properties’ to the old.” *Aventis Pharma Deutschland GmbH v. Lupin, Ltd.*, 499 F.3d 1293, 1301 (Fed. Cir. 2007) (quoting *In re Dillon*, 919 F.2d 688, 692 (Fed. Cir.

1990) (en banc)). In other words, a skilled artisan would expect Choi's polyglyceryl-10 stearate containing emulsions to have the same stability as that recited in claim 34.

It is well-settled that “structural similarity . . . proved by combining references or otherwise, where the prior art gives reason or motivation to make the claimed compositions, creates a prima facie case of obviousness and that the burden (and opportunity) then falls on an applicant to rebut that prima facie case.” *In re Dillon*, 919 F.2d at 692–93. Appellant has not presented evidence or argument sufficient to overcome Examiner's prima facie showing. Instead, Appellant urges that Choi “suggests that the emulsions disclosed therein are not stable enough for them to be used in unimpregnated form.” Appeal Br. 14. That argument is unpersuasive for several reasons. First, while Choi teaches its emulsions are impregnated within an expanded urethane foam to “complet[e] a cosmetic product that ensures product stability,” nothing in Choi suggests the polyglyceryl-10 stearate emulsions⁵ it describes will be unstable outside that foam. *See* FF3. Second, “the discovery of a previously unappreciated property of a prior art composition . . . does not render the old composition patentably new to the discoverer.” *See Atlas Powder Co. v. IRECO Inc.*, 190 F.3d 1342, 1347 (Fed. Cir. 1999). As such, Choi's disclosure of structurally-similar polyglyceryl-10 stearate emulsions is sufficient to support Examiner's

⁵ Appellant points to certain examples in Table 3. *See* Appeal Br. 14. But as Appellant acknowledges none of the emulsions in those examples contain an emulsifier that “is polyglyceryl-10-stearate or structurally related thereto.” *Id.* Thus, the examples in Table 3 do not suggest that an emulsion comprising polyglyceryl-10 stearate as the emulsifying agent would lack stability.

rejection, even though Choi does not teach that those emulsions exhibit the particular stability properties recited in Appellant's claims. Third, claim 34 is a comprising claim; it does not exclude urethane foam from the claimed preparation. Thus, Choi's polyglycerol-10 stearate emulsion both alone, and when impregnated in expanded foam, reads on the preparation in claim 34.

For the same reason, we are unpersuaded by Appellant's argument that Choi fails to teach that its polyglycerol-10 stearate compositions are water resistant. *See* Appeal Br. 15–16. We agree claim 34 requires a “water-resistant” preparation and that Choi does not expressly recognize that its polyglycerol-10 stearate compositions exhibit that property. *See* Reply Br. 4. But Examiner has demonstrated that the structure of Choi's compositions are sufficiently similar to make out a prima facie showing for this element. *See In re Dillion*, 919 F.2d at 692–93; *see also In re Best*, 562 F.2d 1252, 1255 (CCPA 1977) (“Where, as here, the claimed and prior art products are identical or substantially identical . . . the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product.”). Appellant has not presented evidence, nor argument, sufficient to overcome that showing.

Finally, we are unpersuaded by Appellant's additional arguments concerning dependent claims 38 and 39. *See* Appeal Br. 16–17. Claims 38 and 39 additionally recite that “apart from polyglycerol-10 stearate, the preparation comprises no further emulsifiers.” *Id.* at 24. Appellant argues Choi “discourages the use of polyglyceryl-10 stearate” alone because it states it is preferable to use either a surfactant with a lower HLB or the combination of a lower HLB surfactant with a higher HLB surfactant like polyglyceryl-10 stearate (HLB of 12). *Id.* at 16–17. However, that

argument is contradicted by Choi’s express teaching that “[t]he emulsifying agent . . . is preferably a nonionic surfactant having an HLB ranging from 1 to 17,” which would include polyglycerol-10 stearate. Choi 5. Moreover, as Examiner found, Choi teaches that “at least one” emulsifying agent is used and thus teaches embodiments comprising only one such agent. Final 12 (quoting Choi 5). Even if, as Appellant argues, Choi suggests that a combination of emulsifiers is preferred over polyglycery-10 stearate alone that teaching “is not controlling, since all disclosures of the prior art, including unpreferred embodiments, must be considered” in a section 103 inquiry. *Merck*, 874 F.2d at 807 (Fed. Cir. 1989) (quoting *In re Lamberti*, 545 F.2d 747, 750 (CCPA 1976)).

For these reasons, we determine that Examiner’s rejection of claims 34, 37–43, and 45⁶ under 35 U.S.C. § 103 as unpatentable over Choi is supported by the preponderance of the evidence. Accordingly, that rejection is affirmed.

II. Rejection of claims 34–53 over Choi, Knuppel, and De La Poterie

Examiner’s rejection of claims 34–53 is premised on the same findings concerning Choi discussed above. *See* Final 9. In addition, Examiner points to Knuppel’s teaching of a film-forming polymer to support the rejection of claims 35 and 48. The Examiner also points to De La Poterie’s teaching of vinyl-type film-forming agents, such as polyvinylpyrrolidone or isobutene, to support the rejection of claim 36. *Id.* at 10. In addition, Examiner relies on Knuppel for its teaching that water-resistant cosmetic or dermatological formulations can also be provided both

⁶ Appellant does not argue claims 37, 40–43, and 45 separately so those claims stand or fall with claim 34. 37 C.F.R. § 41.37 (c)(1)(iv).

as a hydrodispersion, as recited in claims 44 and 52, as well as its teaching of the cream and lotion forms of preparation, as recited in claims 35, 46, and 47. *Id.* at 9.

We again agree with Examiner’s statement of the rejection and responses to Appellant’s arguments in the Answer and Final Action, which we adopt and incorporate by reference. Appellant groups the claims into four, partially-overlapping groups to present its challenges to Examiner’s rejection: (1) claims 34–46, (2) claims 35, 36, and 48, (3) claims 47–51, and (4) claims 52 and 53. *See* Appeal Br. 18–20. We address Appellant’s arguments as they are presented for each of these groupings below.

Claims 34–46

Appellant urges that the rejection of these claims should be reversed because “CHOI is unable to teach or suggest the subject matter of independent claim 34 (and the claims dependent therefrom) to one of ordinary skill in the art” and “[i]t is not seen that KNUPPEL or DE LA POTERIE cures any of the noted deficiencies of CHOI.” Appeal Br. 18.

For the reasons explained above, we are unpersuaded by Appellant’s arguments concerning Choi and agree that reference alone supports Examiner’s rejection of claims 34, 37–43, and 45 under 35 U.S.C. § 103. Accordingly, we also affirm the obviousness rejection of the same claims over Choi in combination with Knuppel and De La Poterie. Appellant does not present any separate argument concerning dependent claim 44, so that claim falls with claim 34. 37 C.F.R. § 41.37 (c)(1)(iv). We address the separate argument Appellant makes regarding claims 35 and 36 below.

Claims 35, 36, and 48

These claims additionally require that the preparation of the corresponding independent claim comprises one or more film formers. Appellant does not dispute that the film-forming polymers taught in Knuppel and De La Porterie are “film formers,” as recited in these claims, but argues that it is not clear what advantage the use of such film formers would serve “in the impregnation liquids of CHOI” and that Examiner has not provided “any explanation in this regard.” Appeal Br. 19.

We are unpersuaded by Appellant’s argument. Examiner finds that a skilled artisan would be motivated to add a film-forming polymer to Choi’s compositions because Knuppel and De La Porterie teach that doing so can “improve the water-resistance property” of an O/W or W/O emulsion. Final 10. This finding is supported by both Knuppel and De La Porterie, each of which teaches the addition of a film-forming polymer to improve water resistance in cosmetic and dermatological compositions. FF4, FF6. Knuppel also teaches that such film-formers can be used in combination with “foam stabilizers.” Knuppel ¶ 122. Thus, Knuppel evidences that a skilled artisan would reasonably expect the addition of a film former to improve water resistance of an O/W or W/O emulsion whether used in a lotion or cream as taught in Knuppel (FF5) or in a foam as taught in Choi (FF3). Accordingly, we agree Examiner has articulated a sufficient rationale for combining these references to support the rejection of claims 35, 36, and 48.

Appellant further contends that “since film-formers are polymeric compounds they will necessarily increase the viscosity of a corresponding composition, which apparently is not desirable for the emulsions of Choi

which are to be impregnated into expanded urethane foam.” Appeal Br. 19. There is, however, no evidence in the record to support that assertion and we are unpersuaded by Appellant’s attorney argument. *See In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (“An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required to rebut a *prima facie* case of obviousness.”). This is particularly so because Choi teaches that its “UV-blocking W/O or O/W emulsion” compositions are operable over a viscosity ranging from “5000-15000 cps” (*see* Choi 10) and there is no evidence that the addition of a film-former as taught in Knuppel or De La Poterie would cause the viscosity to exceed this range.

Claims 47–51

Appellant contends “it is not seen what would have motivated one of ordinary skill in the art to provide these emulsions in the form of a paste, ointment, gel, or cream (as recited in independent claim 47).” Appeal Br. 18. We disagree. Both Knuppel and Choi teach that O/W emulsions containing UV blockers are routinely prepared in the form of a sunscreen, cream, or lotion. FF1, FF5. Thus, the record supports Examiner’s determination that it would be obvious to prepare the polyglyceryl-10 stearate O/W emulsions taught in Choi as such.

Claims 52 and 53

Claims 52 and 53 require a preparation in the form of a hydrodispersion. Appellant concedes that Knuppel mentions that “hydrodispersions may be used,” but argues that “most of the disclosure of KNUPPEL relates to emulsions” and that the hydrodispersions exemplified in paragraph 143 “contain thickeners (which is to be expected in the case of

a hydrodispersion), which apparently makes them unsuitable or at least highly undesirable as low-viscosity liquids which are to be impregnated into an expanded urethane foam.” Appeal Br. 20. Thus, urges Appellant, “it is not seen that KNUPPEL provides a motivation for one of ordinary skill in the art to convert any of the low-viscosity emulsions . . . of CHOI into (high viscosity) hydrodispersions.” *Id.*

Again, we disagree. Knuppel teaches UV-blocking compositions are routinely formulated as both emulsions and hydrodispersions. FF5. Thus, the record supports Examiner’s finding that it would be obvious to formulate Choi’s polyglycery-10 stearate containing compositions as hydrodispersions. *See* Final 14. Appellant’s argument that doing so would require thickeners that would increase viscosity to a point where the resulting composition would be unsuitable is not supported by evidence and therefore unpersuasive. *See In re Geisler*, 116 F.3d at 1470 (Fed. Cir. 1997). This is particularly so because Knuppel teaches that “thickeners” are optional (*see* Knuppel ¶ 122). Therefore, even accepting Appellant’s argument that adding thickeners to the hydrodispersion would result in an unfavorable viscosity, it would be obvious to avoid that result either by not adding those thickeners or adding them in lower amounts. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”).

For all of these reasons, we determine that Examiner’s rejection of claims 34–53 under 35 U.S.C. § 103 as unpatentable over Choi, Knuppel, and De La Poterie is supported by the preponderance of the evidence.

CONCLUSION

The rejection of claims 34, 37–43, and 45 under 35 U.S.C. § 103 as unpatentable over Choi is affirmed. The rejection of claims 34–53 under 35 U.S.C. § 103 as unpatentable over Choi, Knuppel, and De La Poterie is affirmed.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
34, 37–43, 45	103	Choi	34, 37–43, 45	
34–53	103	Choi, Knuppel, De La Poterie	34–53	
Overall Outcome			34–53	

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)(iv).

AFFIRMED