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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes application details for Sanggu Kim and examiner information for Soroush, Layla.

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SANGGU KIM

Appeal 2020-001677
Application 13/603,335
Technology Center 1600

Before JEFFREY N. FREDMAN, 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 an oil-in-water microemulsion composition. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the Agency for Science, Technology and Research as the real party in interest. Appeal Br. 3. Herein, we refer to the Non-Final Action mailed June 4, 2018 (“Non-Final Act.”); Appellant’s Appeal Brief filed June 28, 2019 (“Appeal Br.”); Examiner’s Answer mailed November 1, 2019 (“Ans.”); and Appellant’s Reply Brief filed December 30, 2019 (“Reply Br.”).

STATEMENT OF THE CASE

Claims 1–21 are on appeal and can be found in the Claims Appendix of the Appeal Brief. Claim 1 is the only independent claim and representative of the claims on appeal. It reads as follows:

1. An oil-in-water microemulsion for a cosmetic or a pharmaceutical application, said microemulsion comprising:
 - (a) 1% to 20% w/w of sucrose ether, wherein the surfactant system has an HLB of between 9 and 16;
 - (b) 1% to 10% w/w/ of a polyhydric alcohol;
 - (c) 0.5% to 10% w/w of an essential oil selected from the group consisting of eucalyptus oil, lavender oil, tea tree oil, green tea oil, rosemary oil, patchouli oil, cedar wood atlas oil, clove leaf oil, palmarosa oil, grapefruit oil, bergamot calabrian oil, pine oil, cardamom oil, clary sage oil, peppermint oil, cinnamon leaf oil, ylang oil, and a combination thereof;
 - (d) triacetin; and
 - (e) water,wherein the microemulsion includes less than 2% w/w/ of a monohydric alkanol; and wherein the microemulsion is suitable for topical application.

Appeal Br. 13.

Appellant seeks review of the following rejections:

- I. Claims 1–4 and 7–21 under 35 U.S.C. § 103 as obvious over De Campo² and Bradbury³; and
- II. Claims 5 and 6 under 35 U.S.C. § 103 as obvious over De Campo, Bradbury, and Bala.⁴

Appeal Br. 5.

² EP 1 598 060 A1, published Nov. 23, 2005 (“De Campo”).

³ US 6,124,362, issued Sept. 26, 2000 (“Bradbury”).

⁴ WO 96/06920, published Mar. 7, 1996 (“Bala”).

Analysis

Examiner’s rejections are premised on the same combination of De Campo and Bradbury as applied to claim 1. *See* Non-Final Act. 6. For this reason, Appellant argues the rejections together “as a unit.” Appeal Br. 6. We too consider the rejections together, selecting claim 1 as the representative claim for our analysis.

The issue is whether the preponderance of the evidence supports Examiner’s conclusion that the oil-in-water microemulsion of claim 1 is obvious over the articulated combination of De Campo and Bradbury.

Examiner finds that De Campo discloses a microemulsion composition containing all of the components in claim 1 with the exception of triacetin. *See* Ans. 5; Non-Final Act. 4–5; (acknowledging that De Campo “fails to specifically teach . . . triacetin”). Examiner relies on Bradbury’s teaching that a variety of different components including “plasticizers” such as “triacetin” may be used as vehicles for certain pharmaceutical compositions. Ans. 5; Non-Final Act. 5. According to Examiner, a skilled artisan would have been motivated to add triacetin to De Campo’s microemulsion by “the teaching of Bradbury et al. that plasticizers including triacetin are useful vehicles in the formulation to act as diluent, dispersant or carrier for the active components in the composition.” Ans. 9.

Appellant contends, *inter alia*, that the rejection is premised on improper hindsight because Examiner selects triacetin “from Bradbury’s long lists [of components] without any plausible rationale for [its] use in an emulsion formulation.” Appeal Br. 9. According to Appellant, Bradbury presents “laundry lists of each type of vehicle – broadly described as being in solid, semi-solid, or liquid form – that could possibly be used in [its] hair

growth regulating formulations to act as a diluent, dispersant, or carrier for the active components (*i.e.*, triterpenes)” of those formulations. Reply Br.

11. Appellant acknowledges that triacetin is mentioned as a “plasticizer” in those lists, but urges

there are literally hundreds of thousands of possible components that could be used as vehicles for Bradbury's triterpene compositions for hair growth regulation, and there is no discussion as to which components could be used in combination to arrive at the stable oil-in-water micremulsions as claimed. Bradbury provides insufficient guidance. Just because Bradbury mentions "triacetin" as a plasticizer does not mean one of skill in the art would be motivated to incorporate triacetin as a component in an oil-in-water microemulsion as claimed, nor would a skilled artisan have any expectation of success for doing so.

Id. at 13; *see also* Appeal Br. 10–11.

On this record, we are persuaded by Appellant’s argument and determine that Examiner has not articulated a sufficient rationale for combining Bradbury’s teaching regarding triacetin with the microemulsion composition of De Campo. As Examiner acknowledges, there is no mention of triacetin, nor of plasticizers more generally, in De Campo. *See* Non-Final 5. The only rationale Examiner provides for why it would have been obvious to add triacetin to De Campo’s microemulsion compositions is the fact that Bradbury lists triacetin as a plasticizer and identifies plasticizers as a type of “vehicle to act as a diluent, dispersant or carrier for the active components” in its formulations. Bradbury 12:41–46. That teaching, however, does not evidence any rationale for why one of ordinary skill in the art would have been motivated to add a plasticizer such as triacetin to the microemulsion composition of De Campo.

Nor is this a case where the prior art reference can be interpreted as teaching a “multitude of effective combinations” all of which are suitable for producing the desired property or effect. *See Merck & Co., Inc. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989). As Appellant points out, Bradbury lists a multitude of wide-ranging vehicles for the preparation of topical compositions in “any form” including creams, gels, tonics, sprays or pomade. Appeal Br. 10 (quoting Bradbury 5:48–51); *see also* Bradbury 12:20–22:59 (listing categories and examples of “acceptable vehicles”). Thus, while Bradbury teaches that its compositions may be “in the form of an emulsion” (Bradbury 12:50), the lengthy lists of vehicles it identifies are intended for the preparation of a broad range of compositions many of which are unrelated to emulsions. For this reason, Bradbury cannot be viewed as teaching that triacetin is useful as “a diluent, dispersant or carrier for the active components” specifically in an emulsion (*id.* at 12:24), much less an “oil-in-water microemulsion” as recited in claim 1.

In sum, neither De Campo, nor Bradbury, evidence a rationale for adding either a plasticizer generally, nor triacetin specifically, to an oil-in-water microemulsion. Because Examiner has not articulated a sufficient rationale for combining these references, Examiner has not met the burden to establish a *prima facie* showing of obviousness.⁵ Accordingly, the preponderance of the evidence does not support the rejection of claim 1 and we, therefore, reverse that rejection. We reverse the rejections of the other claims for the same reason as claim 1.

⁵ Because there is no *prima facie* showing, we do not reach Appellant’s argument that its evidence of unexpected results is sufficient to overcome Examiner’s *prima facie* case. *See* Appeal Br. 7–8; Reply Br. 3–10.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1-4, 7-21	103	De Campo, Bradbury		1-4, 7-21
5, 6	103	De Campo, Bradbury, Bala		5, 6
Overall Outcome				1-21

REVERSED