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3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			VAN SELL, NATHAN L	
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MAHFUZA B. ALI, SUSANNAH C. CLEAR,
TERRY R. HOBBS, JEFFRY L. JACOBS, HAE-SEUNG LEE, and
MARY LOU MORRIS

Appeal 2019-003041
Application 15/302,885
Technology Center 1700

Before KAREN M. HASTINGS, JEFFREY B. ROBERTSON, and
N. WHITNEY WILSON, *Administrative Patent Judges*.

HASTINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ requests our review under 35 U.S.C. § 134(a) of the Examiner's decision rejecting claims 11–19 under 35 U.S.C. § 103 as unpatentable over at least the combined prior art of Whitaker (US

¹ We use the word “Appellant” to refer to the “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies ATI Properties LLC as the real party in interest (Appeal Br. 1).

2010/0203290 A1; published Aug. 12, 2010) and Dhein (US 5,190,932; Mar. 2, 1993).²

We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We AFFIRM.

CLAIMED SUBJECT MATTER

Claim 11 is illustrative of the subject matter on appeal:

11. A roofing granule comprising:

a base roofing granule; and

a coating on the base granule, the coating comprising an acrylate polymer comprising a quaternary ammonium moiety.

Independent claim 19 is directed to a “construction material” comprising a coating composition similar to the coating of claim 11 (Appeal Brief Claims Appendix 7, 8). Appellant’s arguments focus on limitations common to independent claims 11 and 19, and they do not present additional arguments for any claim (*see generally* Briefs). Accordingly, all claims, including those separately rejected, stand or fall together.

OPINION

Upon consideration of the evidence of record and each of Appellant’s contentions as set forth in the Appeal Brief, as well as the Reply Brief, we determine that Appellant has not demonstrated reversible error in the Examiner’s rejections (e.g., *see generally* Ans.). *In re Jung*, 637 F.3d 1356, 1365–66 (Fed. Cir. 2011) (explaining the Board’s long-held practice of

² The additional references applied to various dependent claims are listed in the Summary Table located at the end of this Decision. A discussion of these references is not necessary for disposition of this appeal.

requiring Appellant(s) to identify the alleged error in the Examiner's rejection). We sustain the rejections for the reasons expressed by the Examiner in the Final Office Action and the Answer.

We add the following primarily for emphasis.

It has been established that “the [obviousness] analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007); *see also In re Fritch*, 972 F.2d 1260, 1264–65 (Fed. Cir. 1992) (a reference stands for all of the specific teachings thereof as well as the inferences one of ordinary skill in the art would have reasonably been expected to draw therefrom).

Appellant's main contention is that Whitaker teaches away from using quarternary amines as an algicide and/or bactericide in its coatings because Whitaker states that “specific classes of quaternary amines” do not work well (Whitaker ¶ 114), and instead uses in-situ photodynamic catalysts (Appeal Br. 3, 4; Reply Br. 1). Appellant also argues that there is no motivation to combine Whitaker with Dhein (Appeal Br. 4; Reply Br. 1, 2). Appellant's arguments are not persuasive of reversible error for reasons presented by the Examiner (Ans. 10–13).

In *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 419–20 (2007), the Supreme Court stated that:

In determining whether the subject matter of a . . . claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls. What matters is the objective reach of the claim. If the claim extends to what is obvious, it is . . . [unpatentable] under § 103. One of the ways in which a

patent's subject matter can be proved obvious is by noting that there existed at the time of [the] invention a known problem for which there was an obvious solution encompassed by the patent's claims.

“The Supreme Court’s decision in *KSR* . . . directs us to construe the scope of analogous art broadly, stating that ‘*familiar items may have obvious uses beyond their primary purposes*, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle.’” *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1238 (Fed. Cir. 2010) (quoting *KSR*, 550 U.S. at 420).

It is also well established that a prior art reference must be considered in its entirety, i.e., as a whole, when determining if it would lead one of ordinary skill in the art away from the claimed invention. *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1550 (Fed. Cir. 1983); *In re Harris*, 409 F.3d 1339, 1341 (Fed. Cir. 2005) (whether a reference teaches away from a claimed invention is a question of fact).

One of ordinary skill in the art would have inferred and readily appreciated that a known microbiocidal coating that uses water soluble acrylate polymers with quarternary ammonium groups such as taught in Dhein (a coating that is not the same as the specific classes of quaternary amines taught in Whitaker to be unacceptable as biocidal agents) may be used on any industrial material (Dhein col. 9, l. 50 to col. 10, l. 10). An artisan of ordinary skill would have weighed the advantages and disadvantages of known microbiocidal techniques, such as those in situ photocatalysts taught in Whitaker and the coatings taught in Dhein. “The fact that the motivating benefit comes at the expense of another benefit,

however, should not nullify its use as a basis to modify the disclosure of one reference with the teachings of another. Instead, the benefits, both lost and gained, should be weighed against one another.” *Winner Int’l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n. 8 (Fed. Cir. 2000).

Likewise, Appellant’s arguments regarding the lack of motivation to combine the cited art (Appeal Br. 4; Reply Br. 2) are also unpersuasive for the reasons given above. That is, the arguments fail to account for “the inferences and creative steps that a person of ordinary skill in the art would employ.” *See KSR*, 550 U.S. at 418.

Thus, Appellant has not shown reversible error in the Examiner’s position that it would have been obvious for one of ordinary skill to have used a known microbicide formulation coating technique as exemplified in Dhein on the roofing granules/asphalt construction (industrial) materials of Whitaker, as an alternative to, or in addition to, the photocatalysts used therein. *See KSR*, 550 U.S. at 417 (the predictable use of known prior art elements or steps performing the same functions they have been known to perform is normally obvious; the combination of familiar elements/steps is likely to be obvious when it does no more than yield predictable results); *Ball Aerosol & Specialty Container, Inc. v. Limited Brands, Inc.*, 555 F.3d 984, 993 (Fed. Cir. 2009) (under the flexible inquiry set forth by the Supreme Court, the PTO must take account of the “inferences and creative steps,” as well as routine steps, that an ordinary artisan would employ) (emphasis omitted).

Accordingly, we sustain the Examiner’s rejection of independent claim 1, as well as all claims dependent thereon, noting that no dependent claims are separately argued (Appeal Br. *generally*).

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
11, 12	103	Whitaker, Dhein	11, 12	
13, 14, 19	103	Whitaker, Dhein, Saeki	13, 14, 19	
15	103	Whitaker, Dhein, Friedel	15	
16–18	103	Whitaker, Dhein, Hoshi	16–18	
Overall Outcome			11–19	

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)(1)(iv).

AFFIRMED