



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO., EXAMINER, ART UNIT, PAPER NUMBER, MAIL DATE, DELIVERY MODE. Includes application details for Feng Dong and examiner information for Chriss, Jennifer A.

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte FENG DONG, ROBERT C. LAM, and
TIMOTHY P. NEWCOMB¹

Appeal 2015-006510
Application 13/205,339
Technology Center 1700

Before BRADLEY R. GARRIS, CATHERINE Q. TIMM, and
DEBRA L. DENNETT, *Administrative Patent Judges*.

GARRIS, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134, Appellants appeal from the Examiner's rejections under 35 U.S.C. § 103(a) of claims 1–16 and 19–21 as unpatentable over Lam (US 2004/0033341 A1, pub. Feb. 19, 2004) in view of EFTec (*EFTec Nanofibrillated Fibers*, Engineered Fibers Technology, LLC (2007), www.eftfibers.com) and of claims 17 and 18 as unpatentable over these references in combination with Cordenka (DE 202006000062 U1,

¹ Borg Warner, Inc. is identified as the real party in interest. App. Br. 4.

pub. May 16, 2007, as translated). We have jurisdiction under 35 U.S.C. § 6.

We REVERSE.

Appellants claim a wet friction material comprising fibrillated nanofibers that define a nanofibrous web and friction adjusting particles held by the nanofibrous web (independent claims 1 and 12).

A copy of representative claim 1, taken from the Claims Appendix of the Appeal Brief, appears below.

1. A wet friction material comprising:
a friction interfacing surface for experiencing frictional engagement with an opposed surface in the presence of a lubricant, at least a portion of the friction interfacing surface comprising fibrillated nanofibers that define a nanofibrous web and friction adjusting particles held by the nanofibrous web.

In rejecting the independent claims, the Examiner finds that Lam discloses a wet friction material comprising fibrillated aramid fibers or cellulose fibers defining a fibrous web that holds friction adjusting particles (Final Action 2–3) but that “Lam fails to teach the use of nanofibers” (*id.* at 3). The Examiner concludes that it would have been obvious “to have made the fibrillated fibers of Lam with the diameter of the nano-fibrillated cellulose of EFTec motivated by the desire to have made the fibrillated [fibers of Lam] with a specific diameter that improves performance as set forth in the [EFTec] product disclosure” (*id.* at 3–4).

We agree with Appellants that the Examiner erred in finding Lam discloses fibrillated cellulose fibers (*see, e.g.,* App. Br. 24, *cf. Ans.* 6–7). For the reasons detailed by Appellants (*see, e.g.,* Reply Br. 11–12 (citing Lam ¶¶ 12–15, 17, 18, 49, 53, 55, 56, 59, and 60)), a preponderance of

evidence supports a determination that Lam discloses only aramid fibers as being fibrillated. Therefore, contrary to the Examiner's belief, Lam's noncategorical reference in paragraph 52 to fibrillated fibers would be interpreted by one with ordinary skill in this art as a reference to fibrillated aramid fibers.

We also agree with Appellants that the Examiner's obviousness conclusion is not supported by articulated reasoning with rational underpinning (*see, e.g.*, App. Br. 23). *See In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”) quoted with approval in *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). In defense of the above quoted obviousness conclusion, the Examiner urges that “making the fibers of Lam nanometric in scale [would have been obvious because] . . . fibers of such a scale exist and would be useful in Lam” (Ans. 8). However, the Examiner fails to provide any reasoning with rational underpinning as to why nano scale fibers “would be useful in Lam” (*id.*).²

For this reason, the record contains no proper support for the Examiner's conclusion that it would have been obvious “to have made the

² Such reasoning is essential because EFTec contains no disclosure regarding friction material of the type taught by Lam and because the Examiner cites no evidence in support of (1) the conjecture that “[t]he fibers of Lam's fibrous web are likely to be nanometric” (Ans. 6) and (2) the unembellished statement that “[t]he nanofibrous webs shown in the EFTec reference show pores on scale with those required by Lam” (*id.*).

fibrillated fibers of Lam with the diameter of the nano-fibrillated cellulose of EFTec” (Final Action 3–4).³ We do not sustain, therefore, the Examiner’s § 103 rejections of claims 1–21.

The decision of the Examiner is reversed.

REVERSED

³ In the Response to Argument section of the Answer, the Examiner presents an alternative theory of obviousness by stating “one of ordinary skill in the art would simply use the EFTec nanofibers to make the Lam fabric because they are fibrillated and share the same composition as those [of] Lam” (Ans. 8). We will not consider this alternative theory because it is tantamount to an unauthorized new ground of rejection.