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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ALEXANDER SHPUNT and BENNY PESACH

Appeal 2018-002835
Application 14/848,490¹
Technology Center 2600

Before ELENI MANTIS MERCADER, NORMAN H. BEAMER, and
ADAM J. PYONIN, *Administrative Patent Judges*.

BEAMER, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1, 2, 4–8, and 10–12. We have jurisdiction over the pending rejected claims under 35 U.S.C. § 6(b).

We affirm-in-part.

¹ Appellants identify Apple Inc. as the real party in interest. (App. Br. 1.)

THE INVENTION

Appellants' disclosed and claimed invention is directed to generating a pattern of illumination, and positioning an array of lenses so as to project different respective parts of the pattern onto a scene. (Abstract.)

Independent claim 1, reproduced below, is illustrative of the subject matter on appeal:

1. Projection apparatus, comprising:
 - an illumination source, which is configured to generate a pattern of illumination comprising light and dark spots; and
 - an array of lenses, positioned so that the lenses in the array project different, respective parts of the pattern of the light and dark spots onto a scene.

REJECTIONS

The Examiner rejected claims 1, 4, 5, 7, 10, and 11 under 35 U.S.C. § 103(a) as being unpatentable over Golovkina et al. (US 2007/0183943 A1, pub. Aug. 9, 2007) (hereinafter "Golovkina") in view of Inamoto (US 2005/0281029 A1, pub. Dec. 22, 2005). (Final Act. 2.)

The Examiner rejected claims 2, 6, 8, and 12 under 35 U.S.C. § 103(a) as being unpatentable over Golovkina, Inamoto, and Freedman et al. (US 2010/0118123 A1, pub. May 13, 2010) (hereinafter "Freedman"). (Final Act. 4.)

ISSUES ON APPEAL

Appellants' arguments in the Appeal Brief present the following issues²:

² Rather than reiterate the arguments of Appellants and the positions of the Examiner, we refer to the Appeal Brief (filed Aug. 17, 2017); the Reply

Issue One: Whether the Examiner erred in finding the combination of Golovkina and Inamoto teaches or suggests the independent claim 1 limitations,

an illumination source, which is configured to generate a pattern of illumination comprising light and dark spots; and

an array of lenses, positioned so that the lenses in the array project different, respective parts of the pattern of the light and dark spots onto a scene,

and the commensurate limitation recited in independent claim 7. (App. Br. 6–8.)

Issue Two: Whether the Examiner erred in finding the combination of Golovkina and Inamoto teaches or suggests the claim 4 limitation, “wherein the lenses are configured to project the respective parts of the pattern onto different, respective areas of the scene,” and the commensurate limitation of claim 10. (App. Br. 8–9.)

ANALYSIS

First Issue

In finding the combination of Golovkina and Inamoto teaches or suggests the claim 1 limitations at issue, the Examiner relies on the disclosure of Golovkina of array modulator 18 which receives a beam of light 16 and modulates the beam of light into an array of light and dark areas. (Final Act. 2–3; Golovkina ¶ 16, Fig. 1.) The Examiner further relies on the disclosure of Inamoto of an array of lenses (array 36 of lenses 37)

Brief (filed Jan. 21, 2018); the Final Office Action (mailed Mar. 30, 2017); the Advisory Action (mailed May 12, 2017); and the Examiner’s Answer (mailed Dec. 13, 2017) for the respective details.

configured to project respective parts of a pattern onto different, respective areas of a scene. (Final Act. 3; Ans. 7; Inamoto ¶ 41, Figs. 1–2.)

Appellants argue the Examiner errs because “Golovkina expressly teaches away from the use of lenses in pattern projection” (App. Br. 6 (emphasis omitted) (citing Golovkina Abstract, ¶ 7)) and “Inamoto makes clear that the purpose of his lens array is to create uniform illumination” and teaches away from the use of a lens array in pattern projection. (App. Br. 6 (emphasis omitted) (citing Inamoto Figs. 1–2, ¶¶ 37–38).) Appellants further contend a person of ordinary skill in the art would have no motivation to combine the references because “[i]ncorporating Inamoto’s lens array into Golovkina’s projection optics would have rendered Golovkina’s invention unsatisfactory for its intended purpose of projecting a pattern.” (App. Br. 7 (emphasis omitted).)

We do not agree with Appellants. While Golovkina teaches use of mirrors so that “aberration and dispersion of light between the illuminated elements of the array can be minimized” (Golovkina ¶ 7), one skilled in the art would understand that prevention of such optical effects is needed only in the magnification and projection of small objects, such as “synthesized oligomers” (Golovkina ¶ 7). It is well established that teaching an alternative method does not teach away from the use of a claimed method. *In re Dunn*, 349 F.2d 433, 438 (CCPA 1965).

Here, the Examiner finds, and we agree, that Inamoto’s array of lenses is a different “physical material” that “achiev[es] the claim language.” (Ans. 7.) The Examiner finds, and we agree, that combining Inamoto’s array of lenses with Golovkina’s array modulator would provide “uniform intensity to an illuminated region” (Ans. 8 (citing Inamoto ¶ 3)) so that “[w]hen

uniform intensity is associated with [a] black area, it yields a totally black area and when uniform intensity is associated with [a] white area it yields a totally white area.” (Ans. 8–9.)

Appellants do not point to any evidence of record that the combination relied on would be “uniquely challenging or difficult for one of ordinary skill in the art” or “represented an unobvious step over the prior art.” *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (citing *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418–19 (2007)). The Examiner’s findings are reasonable because the skilled artisan would “be able to fit the teachings of multiple patents together like pieces of a puzzle” as the skilled artisan is “a person of ordinary creativity, not an automaton.” *KSR*, 550 U.S. at 420–21.

Accordingly, we sustain the Examiner’s rejection of independent claim 1 and independent claim 7 commensurate in scope, as well as dependent claims 2, 5, 6, 8, 11, and 12 not argued separately.

Second Issue

Appellants argue the Examiner errs, because in Inamoto “every one of lenses 37 spreads the incident light over the entire area of panel 16, i.e., all of the lenses direct light onto the same area” (App. Br. 8–9 (emphasis omitted) (citing Inamoto Fig. 2)) and Inamoto explicitly states that the pieces of light are “irradiated to overlap each other to a rear face of the liquid crystal panel 16.” (App. Br. 9 (emphasis omitted) (quoting Inamoto ¶ 41).)

We agree with Appellants. The Examiner’s finding that the left-most lens 37 of the array projects onto the left area of the liquid crystal panel and the right-most lens 37 of the array projects on the right area of the liquid

crystal panel (*see* Ans. 9 (citing Inamoto Fig. 2)) appears to rely on an incorrect interpretation of Figure 2, which, when properly viewed, shows a uniform distribution of rays. Accordingly, we are constrained by the record to reverse the Examiner's rejection of claims 4 and 10.

CONCLUSION

For the reasons stated above, we affirm the obviousness rejections of claims 1, 2, 5–8, 11, and 12, and reverse the obviousness rejection of claims 4 and 10.

DECISION

The Examiner's decision rejecting claims 1, 2, 5–8, 11, and 12 is affirmed.

The Examiner's decision rejecting claims 4 and 10 is reversed.

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-IN-PART