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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte COEN ADRIANUS VERSCHUREN
and FERRY ZIJP

Appeal 2015-003897
Application 13/265,282
Technology Center 2800

Before TERRY J. OWENS, N. WHITNEY WILSON, and AVELYN M. ROSS, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1–3, 5, 11–13, 15, and 16. We have jurisdiction under 35 U.S.C. § 6(b).

The Invention

The Appellants claim an illumination system. Claim 1 is illustrative:

> 1. An illumination system comprising a light emitting device and a beam shaping element for generating an angular distribution of light emissions from the illumination system, the beam shaping element being configured for recycling, and

> outputting from the illumination system, at least a portion of light emitted from a light emitting surface of the light emitting device via reflection back towards the light emitting surface, the illumination system further comprising a diffuser arranged substantially parallel to the light emitting surface for diffusing at least part of the recycled light, the diffuser being a diffusely reflective bottom electrode of the light emitting device, wherein the light emitting device includes a top electrode that is disposed at or below the light emitting surface, and wherein the diffusely reflective bottom electrode is disposed below said top electrode and includes deformations at a bottom surface of the bottom electrode.

The Reference

Erchak	US 2008/0128727 A1	June 5, 2008

The Rejections

Claims 1–3, 5, 11–13, 15, and 16 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement and under 35 U.S.C. § 103 over Erchak.[1]

[1] The drawings stand objected to under 37 C.F.R. § 1.83(a) as failing to show deformations at a bottom surface of the bottom electrode (Final Act. 2). The Appellants argue that new matter is the subject of both that objection and the rejection under 35 U.S.C. § 112, first paragraph, written description requirement and that, therefore, new matter is an appealable issue (App. Br. 11). The objection is based upon failure to show electrode deformations, not upon addition of new matter, and although the Examiner refers to the rejection under 35 U.S.C. § 112, first paragraph, written description requirement as a new matter rejection, it actually is based upon lack of adequate written descriptive support in the original Specification, not upon new matter added to the Specification (Final Act. 3–4). Thus, the objection is petitionable to the Technology Center Director, not appealable to the Board. *See* MPEP § 1002.02(c)(4), Rev. 7 (2015).

OPINION

We reverse the rejections.

Rejection under 35 U.S.C. § 112, first paragraph

To comply with the 35 U.S.C. § 112, first paragraph, written description requirement, an applicant's specification must "convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention." *Carnegie Mellon Univ. v. Hoffmann-La Roche Inc.*, 541 F.3d 1115, 1122 (Fed. Cir. 2008) (quoting *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563–64 (Fed. Cir. 1991)).

The Appellants' Specification discloses a light emitting diode device (24) including at its bottom portion a reflecting electrode layer (28) having therein a pattern (60) formed by locally deforming or wrinkling the reflecting electrode layer (28) by laser irradiation preferably applied to the rear side of the organic light emitting diode device (24) (Spec. 11:10–31; 12:8–11; Figs. 3, 4).

The Examiner finds that "'locally wrinkle' can be interpreted to also be on the top surface of the reflective electrode layer 28" (Ans. 3) and that "[t]here is no explicitly disclosure [sic] within the specification as originally filed that deformations are formed on the *bottom surface* of the bottom electrode as such the claim language 'deformations at a bottom surface of the bottom electrode' is not supported by the originally filed specification" (Ans. 3).

The Appellants' disclosure of locally deforming or wrinkling the reflective electrode layer 28 using laser irradiation applied to the organic light emitting diode device (24)'s rear surface (Spec. 11:17–22; 12:8–11)

shows possession of deforming at least the surface of that electrode layer at which the laser irradiation is applied, i.e., its bottom surface.

Hence, we reverse the rejection under 35 U.S.C. § 112, first paragraph.

Rejection under 35 U.S.C. § 103

We need address only the sole independent claim, i.e., claim 1. That claim requires a diffusively reflective bottom electrode including deformations at a bottom surface thereof.

Erchak discloses a light emitting device comprising a light generating region (120), a manipulation region (130) and a reflective layer (150) (¶¶ 47, 57). The manipulation region (130) "can alter one or more characteristics (e.g., polarization, propagation direction, and/or wavelength) of light that is returned back by one or more feedback elements [140]" (¶ 57), and "may be present over [Fig. 1], under [Fig. 6], and/or may intersect the light-generating region [Fig. 7]" (¶ 94). The reflective layer (150) may be "one or more metal layers, a dielectric and/or a semiconductor mirror stack, such as a Bragg reflector" on a backside of the light emitting device (110) (¶ 49), and "[a] backside electrical contact may be achieved via an electrical contact to reflective layer **150** which may be electrically conductive (e.g., may include one or more metal layers)" (*id.*). Light rays "may be manipulated by the manipulation region [130] and then reflected back towards the feedback element **140** by the reflective layer **150** on the backside of the device **110**" (¶ 64) or, "[i]n some embodiments, the manipulation region **130** includes the reflective layer **150**" (¶ 68), wherein "[r]eflective layer **150** may serve as a manipulation region (e.g., for polarization and/or propagation direction,

including but not limited to the tangential component of the light propagation direction)" (*id.*).

The Examiner relies upon Erchak's reflective layer (150) as corresponding to the Appellants' bottom electrode (Final Act. 5), and concludes that "it would have been obvious to one of ordinary skill in the art to have the location of the deformation be on the bottom surface of the bottom electrode as taught by Erchak in the device of embodiment [Figure] 6 of Erchak because such a modification is a suitable alternative location for the manipulation region for the altering one or more characteristics of light that is returned back by feedback elements by ways of polarization, propagation direction, and/or wavelength conversion (¶[0057])" (Final Act. 6).

Establishing a prima facie case of obviousness requires an apparent reason to modify the prior art as proposed by the Examiner. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

Erchak discloses that the manipulation region (130) can include the reflective layer (150) (¶ 68), and in Erchak's Figure 6 embodiment the manipulation region (130) is in the form of protrusions above the reflective layer (150)'s top surface. Erchak, however, indicates that for the reflective layer (150) to function as an electrode it must be electrically conductive such as by including one or more metal layers (¶ 49), in which case it appears to reflect light (Figs. 1–3, 8, 9, 24b, 25, 26). The Examiner does not establish that Erchak would have provided one of ordinary skill in the art with an apparent reason to form deformations at the reflective layer (150)'s bottom surface when that layer is reflective such that light from the light generating region (120) does not reach its bottom surface.

Accordingly, we reverse the rejection under 35 U.S.C. § 103.

DECISION/ORDER

The rejections of claims 1–3, 5, 11–13, 15, and 16 under 35 U.S.C. § 112, first paragraph written description requirement and under 35 U.S.C. § 103 over Erchak are reversed.

It is ordered that the Examiner's decision is reversed.

REVERSED