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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KEVIN HABERERN, MICHAEL JOHN BERGMANN, VAN
MIECZKOWSKI, DAVID TODD EMERSON, and JOHN EDMOND

Appeal 2010-008490
Application 11/681,410
Technology Center 2800

Before CARL W. WHITEHEAD, JR., ERIC S. FRAHM and ANDREW J.
DILLON, *Administrative Patent Judges*.

WHITEHEAD, JR., *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants are appealing claims 1-15. Appeal Brief 1-2. We have jurisdiction under 35 U.S.C. § 6(b) (2012).

We affirm.

Introduction

The invention is directed to “a light emitting device comprising an active region comprising semiconductor material that is configured to generate, by carrier recombination in the active region, photons that are emitted by the light emitting device.” Appeal Brief 2 (element numbers omitted).

Illustrative Claim

1. A light emitting device, comprising:

an active region comprising semiconductor material that is configured to generate, by carrier recombination in the active region, photons that are emitted by the light emitting device;

a first elemental metal ohmic contact on the active region, the first elemental metal ohmic contact having a first face adjacent the active region and a second face remote from the active region and being sufficiently thin such that photons emitted by the active region pass through the first elemental metal ohmic contact from the first face to the second face;

a photon absorbing bond pad on the second face of the first elemental metal ohmic contact, remote from the first face, the bond pad having an area less than the area of the first elemental metal ohmic contact;

a reduced conduction region disposed in the active region beneath the bond pad, spaced-apart from the bond pad by the first elemental metal ohmic contact and configured to reduce current flow through the active region in the region beneath the first elemental metal ohmic contact that is beneath the bond pad; and

a second metal contact electrically coupled to the active region.

Rejections on Appeal

Claims 1-15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Lee (U.S. Patent Number 5,789,768; issued August 4, 1998), Slater, Jr. (U.S. Patent Application Publication Number 2002/0123164 A1; published September 5, 2002), Nakahara (U.S. Patent Application Publication Number 2004/0164314 A1; published August 26, 2004) and Yang (U.S. Patent Application Publication Number 2005/0082558 A1; published April 21, 2005). Answer 3-8.

Issue on Appeal

Do Lee, Slater, Jr., Nakahara and Yang, either alone or in combination, disclose a light emitting device as set forth in claim 1?

ANALYSIS

We have reviewed the Examiner's rejections in light of Appellants' arguments that the Examiner has erred. We disagree with Appellants' conclusions. We concur with the findings and reasons set forth by the Examiner in the action from which this appeal is taken and the reasons set forth by the Examiner in the Answer in response to Appellants' Appeal

Brief. However, we highlight and address specific findings and arguments for emphasis as follows.

Appellants argue that the Examiner's proposed combination of Lee, Slater, Jr. and Nakahara is improper because Nakahara teaches away from using an elemental metal to solve the problem of forming an ohmic contact on a p-type material. Appeal Brief 5. Appellants cite to paragraph [0005] of Nakahara wherein the paragraph Nakahara indicates the disadvantages of utilizing a metal thin film material to form a transparent layer. Appeal Brief 5-6. We do not find Appellants' arguments to be persuasive.

The Examiner finds that Nakahara discloses that elemental electrodes were known and used in the art to form transparent electrodes in spite of Nakahara's acknowledgement of the difficulties associated with the process of thinning the electrodes to form such transparent electrodes. Answer 9. We agree with the Examiner's finding because, as the Examiner stated, the solution provided by Nakahara does not have to be the best solution, it just has to solve the problem at hand. *Id. See also In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994) ("A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use."). Therefore, we are not convinced of Examiner's error.

Appellants further argue that substituting an elemental metal ohmic contact for Lee's indium tin oxide [ITO] layer would change Lee's principle operation because Lee was constructed to operate with a conductive transparent oxide layer. Appeal Brief 7-8. Appellants conclude that **"it would not be obvious to contradict the basic teachings of Lee by substituting an elemental metal ohmic contact, as recited in Claim 1, for**

the transparent conductive oxide.” *Id.* at 8. We do not find Appellants’ argument to be persuasive for the reasons stated above in regard to modifying Lee by incorporating an elemental metal ohmic electrode.

Appellants also argue that Yang teaches away from using manufacturing methods such as the ones described in Lee to form an LED. Appeal Brief 8-9. We are not convinced of Examiner’s error because it is immaterial how an apparatus is made unless it can be shown that the manufacturing method in question renders a different result. *See* M.P.E.P. § 2112.01. Further, Appellants’ arguments address the Examiner’s motivation to combine the references and not a product by process claim limitation. *See* Appeal Brief 8-9. We have determined that the Examiner has satisfied the test for obviousness by setting forth articulated reasoning with some rational underpinning to support his legal conclusion of obviousness. *See In re Kahn*, 441 F.3d 977, 987-88 (Fed. Cir. 2006), *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991) and *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). Therefore, we are not convinced of Examiner’s error and we sustain the Examiner’s rejection of claim 1 for the reasons stated above, as well as claims 2-15, not separately argued.

DECISION

The rejection of claims 1-15 is affirmed.

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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED

peb