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INTELLECTUAL PROPERTY DEPARTMENT
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EXAMINER
NGUYEN, KHIEM D

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PETER T. KAZLAS, JOANNA F. AU, YU CHEN, and NATHAN R. KANE

Appeal 2015-004408
Application 12/987,418
Technology Center 2800

Before JEFFREY T. SMITH, DONNA M. PRAISS, and DEBRA L. DENNETT, *Administrative Patent Judges*.

PRAISS, *Administrative Patent Judge*.

DECISION ON APPEAL[1]

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[1] In our Decision below we refer to the Specification filed January 10, 2011 (Spec.), the Final Office Action appealed from mailed September 3, 2013 (Final Act.), the Appeal Brief filed October 3, 2014 (Br.), and the Examiner's Answer mailed December 26, 2014 (Ans.).

STATEMENT OF CASE

Appellants[2] appeal under 35 U.S.C. § 134 from the Examiner's decision to reject claims 1–4 under 35 U.S.C. § 103(a) as follows[3]:

1. Claims 1 and 2 over Harris[4] and Yu[5]; and

2. Claims 3 and 4 over Harris, Yu, and Nagayama.[6]

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

We AFFIRM.

The claims are directed to a process for forming a plurality of electronic components on a polymeric material coating a metal substrate. Claim 1 is illustrative:

> 1. A process for forming a plurality of electronic components on a polymeric material coating a metal substrate, the process comprising forming a plurality of discrete areas of polymeric material on the metal substrate and thereafter forming the plurality of electronic components including at least one thin film transistor on the discrete areas of polymeric material.

Claims App'x at Br. 15.

Appellants do not separately argue the patentability of dependent claims 2–4. Br. 11–13. In accordance with 37 C.F.R. § 41.37(c)(1)(iv), and based upon the lack of arguments directed to the subsidiary rejection, claims 2–4 will stand or fall together with independent claim 1.

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[2] Appellants identify E Ink Corporation as the real party in interest. Br. 3.
[3] The Appeal Brief includes anticipation by Jacobson et al., US 6,323,989 as a ground of rejection to be reviewed. Br. 8. This appears to be a typographical error as Jacobson is not included in the Final Rejection or in Appellants' argument. *Id.* at 9.
[4] Harris, US 6,127,725, issued Oct. 3, 2000.
[5] Yu, US 6,300,612 B1, issued Oct. 9, 2001.
[6] Nagayama et al., US 5,701,055, issued Dec. 23, 1997 ("Nagayama").

OPINION

Regarding claim 1, the Examiner finds that Harris teaches forming a plurality of discrete areas of insulator material on a metal substrate and thereafter forming a plurality of electronic components including at least one thin film transistor on the discrete areas of insulator material. Final Act. 2–3 (citing Harris 6:23–7:22, Fig. 7, items 24, 52). The Examiner further finds that Harris teaches glass or sapphire as examples of the insulator material and not polymeric material, but Yu discloses forming a plurality of thin film transistors on an insulator material wherein the insulator material is glass or a polymeric material. *Id.* at 3 (citing Harris 6:42, 8:2; Yu 7:9–20). The Examiner also finds that it would have been obvious for one having ordinary skill in the art to modify the method of Harris with polymeric material of Yu because evidences that "insulator materials such as glass and polymeric material are interchangeable . . . in the process for manufacturing [a] semiconductor device." *Id.*

Appellants contend that the Examiner's rejection of claim 1 is in error because "[g]lass and sapphire insulators are well adapted for use in the Harris process; polymeric insulators are not" and assert that Harris's omission of polymeric insulators was deliberate and not "simple ignorance of Harris regarding such insulators" because "the scanning carbon dioxide laser which Harris proposes to use would appear highly problematic" for polymeric particles. Br. 12–13. Appellants concede that "Yu does describe forming a 'semiconductor device' on a polymeric insulator" but contend "no skilled worker would modify Harris in view of Yu" because Yu's "semiconductor device is a photodiode, not a thin film transistor." *Id.* at 13.

Additionally, Appellants note that "Yu is not forming a semiconductor device on a polymeric layer on a metal substrate." *Id.*

The Examiner responds that "Harris does not specifically exclude polymeric materials as the substrate material" and that "one of ordinary skill in the art would control the conditions of the scanning carbon dioxide laser for the specific material comprising the substrate so as not to damage the substrate material." Ans. 7. The Examiner also finds that "one of ordinary skill in the art would be motivated to interchange the glass material for the polymeric material of Yu if a flexible substrate is desired" as taught by Yu. *Id.* at 7–8 (citing Yu 9:17–26). The Examiner further finds that Yu teaches that "polymeric material can be used for thin film transistors" as well as glass or sapphire. *Id.* at 9 (citing Yu 21:1–10).

We are not persuaded by Appellants' arguments and find that the preponderance of the evidence supports the rejection of claim 1 for the reasons provided by the Examiner in the Final Action and the Answer. Final Act. 2–4; Ans. 2–10. We add the following for emphasis.

Both Harris and Yu describe forming thin film transistors on a substrate and further describe features of the claimed process having the benefit of adding flexibility to the product formed. Ans. 6 (citing Harris 7:16–22), 8 (citing Yu 9:17–26). Yu establishes the interchangeability of polymeric material for the glass or sapphire taught in Harris and, specifically their use with thin film transistors. Ans. 9 (citing Yu 21:1–10). "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). Appellants have not shown that it would have been beyond the skill of one having ordinary skill in the art to

control the conditions of Harris's scanning carbon dioxide laser given the materials used in the substrate, specifically polymeric material. Nor have Appellants shown that the substitution of Yu's polymeric material for Harris's glass or sapphire would have been unpredictable. Therefore, the preponderance of the evidence on this record supports the rejection of claim 1 over the combination of Harris and Yu.

In sum, Appellants have not persuaded us of a reversible error in the Examiner's finding that insulator materials such as glass and polymeric material are interchangeable in view of Yu.

CONCLUSION

We sustain the Examiner's rejections.

DECISION

The Examiner's decision is affirmed.

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).

AFFIRMED