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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KEVIN ROBERT SCHWARZKOPF and ANDREI L. GINDILIS¹

Appeal 2015-006736
Application 12/780,157
Technology Center 1700

Before BRADLEY R. GARRIS, ROMULO H. DELMENDO, and
CHRISTOPHER L. OGDEN, *Administrative Patent Judges*.

GARRIS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from the Examiner's
decision rejecting claims 1–20. We have jurisdiction under 35 U.S.C. § 6.

We REVERSE.

¹ Sharp Laboratories of America, Inc., is identified as the real party in
interest. App. Br. 1.

Appellants claim a sensor and a corresponding method wherein two or more types of probes (1402, 1404) bind to a different binding site of a target (1410) so that, when the sensor is exposed to the target, the target is bound to two or more probes at two or more binding sites (independent claims 1 and 11, Fig. 14A).

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

1. A sensor comprising:
 - a substrate;
 - a signal-generation component coupled to the substrate that produces a sensor signal;
 - and
 - two or more types of probes associated with, or bound to, the substrate, each type of probe binding to a different binding site of a target, so that, when the sensor is exposed to the target, the target is bound to two or more probes at two or more binding sites to produce a change, in one or more physical characteristics of the substrate, probes, and/or other substrate-associated entities, that is detected by the signal-generation component, which generates a corresponding sensor signal.

The Examiner rejects claims 1, 3, 4, 8, 11, 13, and 18 under 35 U.S.C. § 102(b) as anticipated by Dill et al. (US 2007/0231794 A1; Oct. 4, 2007) (Non-final Action (dated July 30, 2014) 3) and claims 1–5, 7, 8, 11–15, 17, and 18 under 35 U.S.C. § 102(a) as anticipated by Ghindilis et al. (Sensor Array: Impedimetric Label-Free Sensing of DNA Hybridization in Real

Time for Rapid, PCR-Based Detection of Microorganisms (2009)) (*id.* at 3–5).

Under 35 U.S.C. § 103(a), the Examiner rejects claims 6 and 16 as unpatentable over Ghindilis (*id.* at 6–7) and claims 9, 10, 19, and 20 as unpatentable over Dill and Ghindilis in view of Nygren et al. (US 2002/0192664 A1; Dec. 19, 2002) (*id.* at 7).

Appellants argue that neither Dill nor Ghindilis teaches two or more probes binding to different binding sites of the same target molecule as required by the independent claims (App. Br. 14, 15).

In response, the Examiner determines that the independent claims can be reasonably interpreted as encompassing “a sensor comprising . . . two or more . . . probes that bind two different target molecules” (Ans. 8) and that such a sensor is taught by Dill and Ghindilis (*id.*).

In their Reply Brief, Appellants refer to pages 13–14 of the Specification wherein the disadvantages of currently available sensors having a single-probe-to-binding approach as shown in Figure 12 are compared to the advantages of the inventive sensors having a multiple-probes-to-binding approach as shown in Figures 14A–F (Reply Br. 3–5). Appellants argue that in light of their Specification disclosure, “[t]here is no ambiguity and no room for any reasonable interpretation that does not involve simultaneous binding by two or more probe molecules to the target molecule that is being sensed by the currently claimed sensor” (*id.* at 5).

The record before us reflects that the Examiner’s claim interpretation is deficient in two critical respects. First, the Examiner fails to identify any Specification disclosure in support of this interpretation. In this regard, we emphasize that “claims are given their broadest reasonable interpretation (‘BRI’) consistent with the specification” (emphasis added). *In re Man Machine Interface Technologies LLC*, 822 F.3d 1282, 1286 (Fed. Cir. 2016). Second, the Examiner’s above quoted interpretation of the independent claims inappropriately encompasses sensors having the single-probe-to-binding approach that is disclaimed in the Specification as disadvantageous compared to the multiple-probes-to-binding approach of Appellants’ inventive sensors (*see* Spec. 13–14). “The broadest reasonable interpretation of a claim term cannot be so broad as to include a configuration expressly disclaimed in the specification.” *Id.*

In summary, we do not sustain any of the § 102 and § 103 rejections advanced in this appeal because they are unacceptably based on an interpretation of the independent claims that is not reasonable and consistent with Appellants’ Specification.

The decision of the Examiner is REVERSED.