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| EXAMINER | |
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| KWAK, DEAN P | |

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* BRENDA M. OGLE, LUIS A. FERNANDEZ, KEVIN W. ELICEIRI, and MATTHEW S. HANSEN

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Appeal 2015-005597
Application 12/561,102
Technology Center 1700

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Before CHUNG K. PAK, KAREN M. HASTINGS, and BRIAN D. RANGE, *Administrative Patent Judges*.

HASTINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants[1] seek our review under 35 U.S.C. § 134 of the Examiner's final decision rejecting claims 1–13. We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We REVERSE.

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[1] The Wisconsin Alumni Research Foundation is stated to be the real party in interest (Br. 3).

Claim 1 is illustrative of the appealed subject matter (emphasis added to identify disputed limitation):

> 1. A flow cytometry system comprising:
>
> *a pump providing an unconfined volume of liquid* subject to an applied force;
>
> a channel receiving a liquid flow from the pump, the channel containing the liquid flow along an axis providing a hydrodynamic focusing of a multicellular aggregate within the liquid without disruption of intercellular connections of the multicellular aggregate;
>
> a multiphoton laser scanning microscope positioned to illuminate multicellular aggregates within the liquid flow and to record a fluorescence of multiple cells of the multicellular aggregates isolated to a focal plane through the multicellular aggregates as the multicellular aggregates reach an analysis point in the channel; and
>
> a control system executing at least one stored program to receive data from the multiphoton laser scanning microscope to provide an output signal providing an assessment of the multicellular aggregates based on recorded fluorescence from the multiple cells along the focal plane.

Br. 15 (Claims Appendix).

The Examiner rejected claims 1–6 under 35 U.S.C. § 102(b) as being anticipated by Ye et al. (WO 2006/034046 A2, published Mar. 30, 2006) ("Ye"). The Examiner also rejected claims 1–9, 12, and 13 under 35 U.S.C. § 103 as unpatentable over the combined prior art of Chupp et al. (US 5,939,326, issued Aug. 17, 1999) ("Chupp") and Zarling et al. (US 6,537,829 B1, issued Mar. 25, 2003) ("Zarling"), and claims 10 and 11 over the combined prior art of Chupp, Zarling, and Tseng et al. (US 2010/0291584 A1, published Nov. 18, 2010) ("Tseng").

PRINCIPLES OF LAW

"[D]uring examination proceedings, claims are given their broadest reasonable interpretation consistent with the specification." *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1256 (Fed. Cir. 2007) (quoting *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000)). *See also In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004) (scope of the claims in patent applications is not determined solely on the basis of the claim language but upon giving claims their broadest reasonable construction in light of the specification as it would be interpreted by one of ordinary skill in the art.) (citations omitted); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) ("[T]he specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" (Citation omitted)).

ANALYSIS

The dispute in this case is whether any of the applied prior art teaches or suggests "a pump" as required in the sole independent claim 1. Appellants argue that the Examiner has not shown how either Ye or Chupp discloses this element as required by the disputed claims. A preponderance of the evidence supports Appellants' position.

Appellants urge that one of ordinary skill in the art would not consider the syringe pump of Ye (Br. 7–9) nor the piston pump or peristaltic pumps of Chupp "a pump providing an unconfined volume of liquid" as required by the claims (Br. 10–12). Appellants state that in light of the Specification, one of ordinary skill in the art would understand that "a pump providing an unconfined volume of liquid subject to an applied force" is, e.g., a pipette

fed droplet of fluid subject to pressure supplied by surface tension of the droplet, acting as surface tension pump (Spec. ¶¶ 18, 20, 50, 51 ("passive pumping harnesses the higher internal pressure of smaller drops of liquid"), 52, and 58 ("surface tension pumping provides for flow rates consistent with the preservation of the integrity of the multicellular aggregates"); Figs. 3, 4; Br. 5 ("A pump (56) provides an unconfined volume of liquid subject to an applied force"), 8, 9).[2]

Contrary to the Examiner's position that the claim language encompasses the pumps of the applied prior art (Ans. 9, 10), we conclude that the plain meaning of "an unconfined volume of liquid" requires that the fluid not be confined to a limited space, such as an unconfined drop of fluid as described in the Specification. The Examiner has not adequately explained how one of ordinary skill would have considered Ye's syringe pump which forces the fluid through capillary tube 14 to include an unconfined volume of fluid (Ye ¶ 33). Thus, on this record, Ye's syringe pump falls short of being "a pump providing an unconfined volume of liquid" as required by the claims when properly interpreted in light of the Specification. Likewise, the Examiner has not adequately explained how one of ordinary skill would have considered Chupp's pumps 190 or 232 to include an unconfined volume of fluid. The Examiner's mere conclusion that the claim language encompasses these pumps is not sufficient (Ans. 9,

[2] While the Specification does not use the phrase "an unconfined volume of liquid," it does explains how a pipette deposited drop of fluid 56, which plainly is "an unconfined volume of liquid," acts as a surface tension pump (e.g., Spec. ¶¶ 50, 51 Figs. 3, 4). The Specification nonetheless should provide proper antecedent basis for the claim language. *See* 37 C.F.R. 1.75(d)(1). We leave it to the Examiner and Appellants to address this issue.

10). Thus, on this record, Ye's syringe pump and Chupp's pumps as identified by the Examiner each fall short of being a "pump providing *an unconfined volume of liquid* subject to an applied force" as required by the claims when properly interpreted in light of the Specification.

Therefore, we agree with Appellants that the Examiner has taken an unreasonably broad interpretation of the aforementioned claim limitation when considered in light of the Specification for the reasons explained in the Appeal Brief. As such, we cannot sustain the anticipation rejection based on Ye nor the obviousness rejection based on Chupp as applied to independent claim 1.

Accordingly, the Examiner's 35 U.S.C. § 102 and 103 rejections are reversed.

## DECISION

The Examiner's decision is reversed.

## ORDER

REVERSED