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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/795,976	07/10/2015	Robert Zelenka	58534.303.11.1	3656

12827 7590 01/31/2019

Fredrikson & Byron, P.A.
Intellectual Property Group, ACIST Patents
200 South Sixth Street, Suite 4000
Minneapolis, MN 55402

EXAMINER
LUONG, PETER

ART UNIT	PAPER NUMBER
3793	

NOTIFICATION DATE	DELIVERY MODE
01/31/2019	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ROBERT ZELENKA and TOM MOORE

Appeal 2018-000015
Application 14/795,976[1]
Technology Center 3700

Before MURRIEL E. CRAWFORD, MICHAEL W. KIM, and PHILIP J. HOFFMANN, *Administrative Patent Judges*.

HOFFMANN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellants appeal from the Examiner's rejection of claims 11 and 15–23.[2] We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

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[1] According to Appellants, ACIST Medical Systems, Inc. is the real party in interest. Appeal Br. 3.

[2] Although the Appeal Brief's Claims Appendix lists claims 12–14, the Examiner objects to these claims. Appeal Br., Claims App.; Final Office Action 3.

According to Appellants, the invention relates to "an imaging probe of an imaging catheter." Spec. ¶ 2. Claims 11 and 21 are the independent claims on appeal. Below, we reproduce claim 11 as illustrative of the appealed claims.

> 11. A method of imaging an anatomical structure of a patient comprising:
>
> (a) providing an imaging catheter that includes (i) a sheath with an opening in a distal end and (ii) an imaging probe in the sheath having a distal housing and a transducer disposed in the distal housing, the distal housing further including a distal tip wall opening having an axis that is non-parallel with a front side of the transducer;
>
> (b) positioning the imaging catheter within the anatomical structure of the patient;
>
> (c) generating and sensing ultrasonic waves with the transducer to enable visualization of the anatomical structure of the patient; and
>
> (d) directing fluid within the sheath, over the front side of the transducer, out the distal tip wall opening, and out the opening in the distal end of the sheath while generating and sensing ultrasonic waves to prevent air bubble formation near the transducer, wherein directing fluid over the front side of the transducer includes directing fluid at an inclined angle from a proximal portion of the front side to a distal portion of the front side.

REJECTION AND PRIOR ART

The Examiner rejects claims 11 and 15–23 under 35 U.S.C. § 102(b) as anticipated by Angelsen et al. (US 2005/0203396 A1, pub. Sept. 15, 2005) (hereinafter "Angelsen").

ANALYSIS

Independent claim 11 and its dependent claims 15–20

In support of independent claim 11's rejection, the Examiner finds that "Angelsen . . . discloses . . . an imaging catheter that includes a sheath (800) with an opening in a distal end (815)[,] . . . an imaging probe in the sheath having a distal housing (Fig[ure] 8)[,] and a transducer disposed in the distal housing at an angle sloping toward a catheter center axis in a proximal direction (Fig[ure] 2)." Answer 2. Appellants argue that the Examiner's rejection is in error because Angelsen fails to disclose *directing fluid over a front side of a transducer at an inclined angle from a proximal portion of a front side to a distal portion of the front side*, and out the distal tip wall opening, as required by claim 11. Appeal Br. 11. For the reasons set forth below, we do not sustain the Examiner's rejection of the independent claim.

As set forth above, claim 11 recites "directing fluid at an inclined angle from a proximal portion of the front side to a distal portion of the front side." Consistent with Appellants' figures and written description, we construe this to mean that the transducer's front side is inclined such that fluid flows upward from the transducer's proximal portion to the transducer's distal portion that is near the distal tip wall that includes a distal tip wall opening. *See* Figures 1–3 (in which transducer 22 is oriented such that fluid flows upward from transducer 22's proximal portion to transducer 22's distal portion that is adjacent distal tip wall 24 having distal tip wall opening 38); *see also* Spec. ¶¶ 13–14.

The Examiner does not support adequately, however, that Angelsen discloses directing fluid at an inclined angle, as claimed. More specifically,

it is not clear to us that Angelsen's Figure 2 discloses the claimed fluid flow. *See* Answer 3–5. Although "[t]he Examiner interprets proximal portion and distal portion as a matter of perspective depending on which side of the probe is viewed," this is improper because we do not agree with the Examiner that "Appellant[s] ha[ve] failed to set forth a frame of reference with respect to the transducer." *Id.* at 4. Instead, as set forth above, claim 11 requires that the transducer's front side is inclined such that fluid flows upward from the transducer's proximal portion to the transducer's distal portion that is near the distal tip wall that includes a distal tip wall opening.

Thus, based on the foregoing, we do not sustain independent claim 11's rejection. We also do not sustain the Examiner's rejection of claims 15–20 that depend from claim 11, and which the Examiner rejects for similar reasons as claim 11.

Independent claim 21 and its dependent claims 22 and 23

Independent claim 21 recites "fluid flow promotion means for facilitating non-turbulent fluid flow over a front side of the transducer to prevent air bubble formation near the transducer." Appellants indicate support for this limitation is provided at paragraphs 4–8 and 12–16, and in Figures 1–3. Appeal Br. 5.

Consistent with Appellants' argument and the Examiner's rejection, the Specification describes the fluid-flow promotion means as the inclined front side of the transducer, as described above with respect to claim 11. *See* Answer 2–4; *see also* Appeal Br. 5–6; and Spec. ¶¶ 13–15. Thus, we do not sustain independent claim 21's rejection for substantially the same reasons

we do not sustain claim 11's rejection. Further, we do not do not sustain the Examiner's rejection of claims 22 and 23 that depend from claim 21, and which the Examiner rejects for similar reasons as claim 21.

DECISION

We reverse the Examiner's anticipation rejection of claims 11 and 15–23.

REVERSED