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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/649,710	10/11/2012	M. Dexter Hagy	HMD-11-CON	1005
22827	7590	11/26/2019	EXAMINER	
DORITY & MANNING, P.A. POST OFFICE BOX 1449 GREENVILLE, SC 29602-1449			CWERN, JONATHAN	
			ART UNIT	PAPER NUMBER
			3793	
			NOTIFICATION DATE	DELIVERY MODE
			11/26/2019	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte M. DEXTER HAGY and STEPHEN F. RIDLEY

Appeal 2019-000709
Application 13/649,710
Technology Center 3700

Before ANTON W. FETTING, PHILIP J. HOFFMANN, and
CYNTHIA L. MURPHY, *Administrative Patent Judges*.

HOFFMANN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's rejection of claims 27, 29–31, 33, 34, 41–51, 53, 54, and 57–61. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

According to Appellant, the invention is directed to an “ultrasound device[] that can include a detector for detecting the location of a target associated with a probe while the probe is h[e]ld or moved within a probe

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. According to Appellant the real party in interest is Soma Research, LLC. Appeal Br. 3.

guide of the ultrasound device.” Spec. ¶ 35. Claims 27, 41, and 53 are the independent claims on appeal. Below, we reproduce claim 27 (reformatted) as representative of the appealed claims.

27. A probe for use with an ultrasound device, the probe comprising
a first end and
a second end,
the first end comprising a subdermal probe tip,
the second end comprising a target for a detector,
the target comprising an array of permanent magnets.

REJECTION AND PRIOR ART

The Examiner rejects all of the claims—claims 27, 29–31, 33, 34, 41–51, 53, 54, and 57–61—together under 35 U.S.C. § 103(a) as unpatentable over Ridley et al. (US 2007/0208255 A1, pub. Sept. 6, 2007) (“Ridley”), Burreson et al. (US 2002/0077752 A1, pub. June 20, 2002) (“Burreson”), Messerly et al. (US 2009/0156926 A1, pub. June 18, 2009) (“Messerly”), and Ikeda et al. (US 2009/0275833 A1, pub. Nov. 5, 2009) (“Ikeda”).

ANALYSIS

We begin our analysis with reference to independent claim 27. Initially, we note that the Examiner complicates the record by rejecting all twenty-four pending claims together, and by failing, in the rejection, to use reference numbers to identify any components in the prior art references on which the Examiner relies to disclose the claim recitations, except for one

component in Ikeda, which the Examiner mischaracterizes as described below. *See* Final Action 3–5.

Regardless, with respect to the Examiner’s rejection of independent claim 27, we discern that, based on the Examiner’s findings and conclusions, the Examiner’s proposed combination of Ridley, Burreson, and Messerly results in an arrangement that provides a probe for use with an ultrasound device, the probe comprising a first end and a second end, the *first end comprising* a subdermal probe tip and *a target* for a detector, where the target comprising an array of permanent magnets—i.e., the arrangement thus far provides that the *target* comprises an array of permanent magnets *on the first end* that comprises the subdermal probe tip, and therefore does *not* provide that the *target* that comprises the array of permanent magnets is *on a second probe-tip end* that is opposite the first end that comprises the subdermal probe tip, as claimed. *Id.* The Examiner then determines that

[i]t would have been obvious . . . to have modified the combined invention of Ridley, Burreson, and Messerly to locate the magnet on a second end away from the probe tip, along a center line of the probe as taught by Ikeda, in order to reduce the size/weight of the portion inserted into the patient by not placing the magnet in the portion inserted into the patient, and to ensure that the magnet is placed closer to the detection device. In the combination of the references, in which Ridley includes a syringe with the second end of the probe located at the base of the syringe (Figure 9), the magnet would thus be mounted at a base of the syringe and the second end of the probe.

Id. at 5; *see also* Answer 3–4. However, as Appellant points out (*see, e.g.,* Appeal Br. 13; *see also* Reply Br. 3–4), to which the Examiner does not respond (*see, e.g.,* Answer 9), Ikeda fails to disclose a *magnetic target* on a

second probe-tip end, but instead discloses a *magnetic sensor* 70, which is itself “a 3-dimensional position detecting means” (*see, e.g.*, Ikeda ¶ 3).

Based on our review of the record, the Examiner’s determinations in the Final Office Action and the Answer do not support adequately that it would have been obvious for one of ordinary skill to begin with an arrangement that provides a probe for use with an ultrasound device, the probe comprising a first end and a second end, the first end comprising a subdermal probe tip and a target for a detector, where the target comprising an array of permanent magnets, and then to move the *magnetic target* to the second end, based on a Ikeda’s teaching that a *magnetic sensor* is located on a second probe-tip end. There exists too large of an unexplained gap in the Examiner’s reasoning to establish that one of ordinary skill would relocate the *magnetic target*, as the Examiner proposes, based on Ikeda’s teaching regarding a *magnetic sensor*.

Further, as Appellant points out, the Examiner’s “rationale [for the proposed movement of the magnetic target from the first probe-tip end to the second probe-tip end] is neither presented nor supported in any of the cited references.” Reply Br. 4. Instead, it appears that “Messerly, which is the only reference that incorporates a permanent magnet on a subdermal device, includes the permanent magnet on the portion that is inserted into the patient.” *Id.*; *see also* Messerly ¶ 2. Thus, contrary to the Examiner’s rationale that supports the rejection, based on the prior art that the Examiner cites there apparently is no need to move the magnetic target from the portion of subdermal device which is inserted into a patient.

We also agree with Appellant that, contrary to the Examiner’s proffered rationale, based on the prior art that the Examiner cites there

apparently is no need to move the magnetic target closer to the detection device. Instead, “[a]ccording to Messerly, which is the only reference cited that includes a permanent magnet on a subdermal device, the magnet functions through the patient’s skin for its intended purpose without issue.” Reply Br. 5; *see, e.g.*, Messerly ¶ 3.

For all of these reasons, the Examiner does not support adequately that

[i]t would have been obvious . . . to have modified the combined invention of Ridley, Burreson, and Messerly to locate the magnet on a second end away from the probe tip, along a center line of the probe as taught by Ikeda, in order to reduce the size/weight of the portion inserted into the patient by not placing the magnet in the portion inserted into the patient, and to ensure that the magnet is placed closer to the detection device.

Final Action 5; *see also* Answer 3–4. Thus, based on the foregoing, we do not sustain the Examiner’s obviousness rejection of independent claim 27, or of claims 28–31, 33, and 34 that depend from, and the Examiner rejects with, claim 27.

Independent claim 41 includes a recitation similar to that discussed above in claim 27. Therefore, we do not sustain the obviousness rejection of claim 41 for substantially the same reasons that we do not sustain claim 27’s rejection. Still further, we do not sustain the rejection of claims 42–51 and 61 that depend from independent claim 41.

Independent claim 53 recites the following:

53. A system for use with an ultrasound device, comprising:

a probe, the probe comprising a subdermally insertable end and an external end;

a target for a detector, the target comprising a permanent magnet having a magnetic field strength that is electronically, non-contact detectable at a distance from the target; and

a syringe that is attachable to the probe, wherein the target is mounted at a base of the syringe.

Appeal Br., Claims App. (emphases added). For reasons similar to those discussed above, based on our review of the record, the Examiner does not support adequately that it would have been obvious for one of ordinary skill to begin with an arrangement, based on teachings of Ridley, Burreson, and Messerly, which provides a probe for use with an ultrasound device, the probe comprising an insertable end and an external end, the insertable end comprising a target for a detector, where the target comprising a permanent magnets, and then to move the *magnetic target* to an end of the probe to which a syringe connects, based on a Ikeda's teaching of a *magnetic sensor* on the end of the probe that is opposite the insertable end. Thus, based on the foregoing, we do not sustain the Examiner's obviousness rejection of independent claim 53, or of claims 54 and 57–60 that depend from, and the Examiner rejects with, claim 53.

CONCLUSION

We REVERSE the Examiner's obviousness rejection of claims 27, 29–31, 33, 34, 41–51, 53, 54, and 57–61.

Appeal 2019-000709
Application 13/649,710

In summary:

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
27, 29–31, 33, 34, 41–51, 53, 54, 57–61	103(a)	Ridley, Burreson, Messerly, Ikeda		27, 29–31, 33, 34, 41–51, 53, 54, 57–61
Overall Outcome				27, 29–31, 33, 34, 41–51, 53, 54, 57–61

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

REVERSED