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ALTER MORSCHAUSER, ALYSSA MARGO

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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* ALAN SHI, DARREN A. JANZIG, BERNARD Q. LI,  
RICHARD T. STONE, DALE F. SEELEY, and PENG CONG

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Appeal 2018-006008  
Application 14/206,650<sup>1</sup>  
Technology Center 3700

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Before MICHAEL C. ASTORINO, BRADLEY B. BAYAT, and  
TARA L. HUTCHINGS, *Administrative Patent Judges*.

ASTORINO, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), the Appellants appeal from the Examiner’s decision rejecting claims 1–22, 26, and 27. We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We REVERSE.

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<sup>1</sup> According to the Appellants, “[t]he Real Party in Interest is Medtronic, Inc., of Minneapolis, Minnesota, the assignee of record, which is a subsidiary of Medtronic plc of Dublin, Ireland.” Appeal Br. 3.

## STATEMENT OF THE CASE

### *Claimed Subject Matter*

Claims 1 and 11 are the independent claims on appeal. Claim 1, reproduced below, is illustrative of the subject matter on appeal.

1. A medical device comprising:  
a lead including an electrically conductive lead wire; and  
an electrode electrically coupled to the lead wire, the electrode including a substrate and a coating on an outer surface of the substrate, wherein the lead wire is formed of a composition comprising titanium or titanium alloy, wherein the substrate is formed of a composition comprising one or more of titanium, tantalum, niobium, or an alloy thereof, wherein the coating comprises at least one of Pt, TiN, IrOx, or poly(dioctyl-bithiophene) (PDOT).

### *Rejections*

Claims 1, 5, 6, 8, 10, 11, 15, 16, 18, 20, 22, and 27 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Dahl et al. (US 5,203,348, issued Apr. 20, 1993) (hereinafter “Dahl”).

Claims 2–4, 7, 9, 12–14, 17, 19, 21, and 26 are rejected under 35 U.S.C. § 103(a) as unpatentable over Dahl.

## ANALYSIS

Independent claim 1 calls for “[a] medical device comprising . . . a lead including an electrically conductive lead wire” and “an electrode electrically coupled to the lead wire, . . . wherein the lead wire is formed of a composition comprising titanium or titanium alloy.” Appeal Br., Claims App. Independent claim 11 calls for a method of forming a similar medical device as called for in claim 1. *See id.*

The Appellants argue that the Examiner fails to establish that Dahl discloses a medical device that includes a lead wire formed of a composition comprising titanium or titanium alloy as called for by claims 1 and 11. Appeal Br. 5, 9. The Appellants' argument is persuasive.

For the rejection of claims 1 and 11 under 35 U.S.C. § 102(b) as *anticipated* by Dahl, the Examiner finds that Dahl's electrically conductive lead 26, as shown in Figure 1, corresponds to the claimed "lead wire . . . formed of a composition comprising titanium or titanium alloy." Final Act. 5. However, Dahl's lead 26 in the embodiment of Figure 1 is "formed of a core **30** of silver surrounded by a tube **32** of stainless steel." Dahl, col. 5, ll. 23–29; *see id.* at col. 4, ll. 29–34, Fig. 2. Simply put, in the embodiment of Figure 1 lead 26 is not formed of a composition comprising titanium or titanium alloy. *See* Appeal Br. 6.

The Examiner also relies on Dahl's disclosure at column 6, lines 56–59 to support the finding that lead 26 corresponds to the claimed "lead wire . . . formed of a composition comprising titanium or titanium alloy." Final Act. 5. Dahl describes:

FIG. 6 illustrates an alternative construction for the *electrode segments* of either electrode **16** or electrode **44**, involving a plurality of composite conductors **76** in a twisted configuration. Each of the conductors can include a silver core within a stainless steel tube coated with platinum as previously described. Alternative composite conductors for single and multiple wire arrangements include platinum or titanium ribbon or wire, clad with platinum.

Dahl, col. 6, ll. 51–59 (*italics added*); *see also id.* at Abstract, col. 3, ll. 21–33. This description does not support the Examiner's finding that Dahl's lead is formed of a composition comprising titanium or titanium alloy"

because it is directed to an electrode segment rather than a lead wire.<sup>2</sup> *See* Appeal Br. 7–8.

Further, the Examiner points to Dahl’s disclosure at column 5, lines 39–46 to support the finding that lead 26 corresponds to the claimed “lead wire . . . formed of a composition comprising titanium or titanium alloy.”

Final Act. 6. Dahl describes:

the construction of electrode segment **22** (and likewise segments **18** and **20**) over substantially all of its length is *substantially similar* to the construction of the conductive portion of lead **26**. Thus the segments also are highly electrically conductive. Platinum coating **34** provides a further advantage for the segments, which are not covered by the insulative sheath.

Dahl, col. 5, ll. 39–46 (italics added); *see id.* at col. 4, ll. 29–30, 33–34, Fig. 3. The Examiner determines that Dahl’s lead 26 is made of titanium because the construction of the electrode segments and the lead is “substantially similar”, and the electrode segments are made of titanium. *See* Ans. 9–10.

However, the description in Dahl’s column 5, lines 39–46 is limited to the embodiment shown in Figures 1–3. *See* Dahl. col. 4, ll. 31–36. In this embodiment, lead 26 is not described as made of titanium, rather it’s described as formed of a silver core 30 surrounded by a stainless steel tube 32. *Supra.* And, in Dahl’s Figure 6, an alternative (i.e., different) embodiment, only the electrode segments are described as including titanium. *Supra.* In this alternative embodiment, Dahl does not include a

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<sup>2</sup> The Examiner finds Dahl’s electrode segment (e.g., 18, 20) corresponds with the claimed “electrode”; the claimed electrode is electrically coupled to the lead wire. *See* Final Act. 5 (citing Dahl, Fig. 1); Appeal Br., Claims App.

statement that the construction of the electrode segment is substantially similar to the construction of the lead. Therefore, the Appellants persuasively contend that “instead of pointing out to a single embodiment of Dahl that supports the alleged anticipation of the subject matter recited by claim 1, the Examiner . . . improperly relied on two different embodiments.” Reply Br. 4; *see* Appeal Br. 8.

Alternatively, for the rejection of claims 1 and 11 under 35 U.S.C. § 103(a) as *obvious* over Dahl, the Examiner finds that “Dahl . . . does not explicitly disclose that both the conductive lead (as depicted as 26 in figure 1) and the electrode are constructed of titanium.” Final Act. 6. To remedy this deficiency, the Examiner concludes:

It would have been obvious to one having ordinary skill in the art . . . to modify the construction of the conductive lead wire, as well as the electrode portion, to be comprised of titanium since employing titanium as electrically conductive material is well known in the electrical art (Dahl et al., col. 6, lines 51–59) for employment in electrical leads and electrodes.

*Id.* In the Answer, the Examiner adds that “there is suggestion and motivation in the reference itself in addition to knowledge generally available to one of ordinary skill in the art.” *See* Ans. 10.

The Appellants persuasively argue that the Examiner fails to include a legally sufficient reason for modifying the Dahl’s lead wire to be formed of a composition comprising titanium or titanium alloy as claimed. *See* Appeal Br. 11–14. The Examiner’s rejection ostensibly rests on a conclusion that one of ordinary skill in the art *could* have modified Dahl’s lead wire to be titanium. The rejection, however, fails to provide a reason why one of ordinary skill in the art *would* have modified Dahl’s lead wire to be titanium. *See id.* at 14. Therefore, we determine that the Examiner’s rejection fails to

articulate reasoning with some rational underpinning to support the legal conclusion of obviousness. *See In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds . . . [require] some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”) (cited with approval in *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007)).

Thus, we do not sustain the Examiner’s rejection of claims 1, 5, 6, 8, 10, 11, 15, 16, 18, 20, 22, and 27 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Dahl. We also do not sustain the Examiner rejection of dependent claims 2–4, 7, 9, 12–14, 17, 19, 21, and 26 under 35 U.S.C. § 103(a) as unpatentable over Dahl, because the Examiner fails to include additional findings and/or reasoning to adequately support the rejection of these claims.

#### DECISION

We REVERSE the Examiner’s decision rejecting claims 1–22, 26, and 27.

REVERSED