UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/003,022	01/07/2011	Szabolcs Deladi	2008P00411WOUS	6034

24737 7590 11/16/2016

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
465 Columbus Avenue
Suite 340
Valhalla, NY 10595

EXAMINER
NGANGA, BONIFACE N

ART UNIT	PAPER NUMBER
3769	

NOTIFICATION DATE	DELIVERY MODE
11/16/2016	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

marianne.fox@philips.com
debbie.henn@philips.com
patti.demichele@Philips.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SZABOLCS DELADI, NENAD MIHAJLOVIC, and RALPH KURT

Appeal 2014-005059
Application 13/003,022[1]
Technology Center 3700

Before JENNIFER D. BAHR, STEFAN STAICOVICI, and FREDERICK C. LANEY, *Administrative Patent Judges*.

STAICOVICI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Szabolcs Deladi et al. (Appellants) appeal under 35 U.S.C. § 134(a) from the Examiner's final decision rejecting claims 1–4, 8, 13, and 15.[2] We have jurisdiction over this appeal under 35 U.S.C. § 6(b).

---

[1] According to Appellants, the real party in interest is Koninklijke Phillips N.V. Appeal Br. 3 (filed Sept. 26, 2013).

[2] Claims 6, 7, 9–12, and 14 are withdrawn. Ans. 2 (transmitted Oct. 18, 2013). Claim 5 is objected to by the Examiner as being dependent upon a rejected base claim and otherwise indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim. Final Act. 15 (transmitted Apr. 29, 2013). Claim 5 is not part of the instant appeal.

SUMMARY OF DECISION

We AFFIRM.

INVENTION

Appellants' invention "relates to a device and a method enabling a safe ablation of material by thermally treating the same." Spec. 1, ll. 2–3.

Claims 1 and 15 are independent. Claim 1 is illustrative of the claimed invention and reads as follows:

> 1. Device comprising:
> a supply unit (2) configured to supply ablation energy to a material (4); and
> a container (3) comprising a stimuli-responsive substance (3') adjacent the material;
> wherein said stimuli-responsive substance is configured to change its state from a first state to a second state if a temperature of said material increases above an upper threshold temperature due to at least a portion of said ablation energy passing through said stimuli-responsive substance into the material, so that said temperature of said material does not increase above a temperature limit.

REJECTIONS

The following rejections are before us for review:

I. The Examiner rejected claims 1, 2, 4, 8, 13, and 15 under 35 U.S.C. § 102(b) as being anticipated by Mattiuzzi (WO 2008/003642 A1, pub. Jan. 10, 2008).

II. The Examiner rejected claims 1, 2, 8, and 15 under 35 U.S.C. § 102(b) as being anticipated by Goodman (US 5,785,703, iss. July 28, 1998), as evidenced by Gershenzon et al. (hereafter "Gershenzon") ("*Subnanosecond Photoresponse of a YBaCuO*

Thin Film to Infrared and Visible Radiation by Quasiparticle Induced Suppression of Superconductivity," IEEE, vol. 60, No. 6, p. 903 (June 1992), as cited by Goodman in col. 13, ll. 26–29).

III. The Examiner rejected claim 3 under 35 U.S.C. § 103(a) as being unpatentable over Mattiuzzi and Richard (US 2009/0053276 A1, pub. Feb. 26, 2009).

ANALYSIS

Rejection I

Independent claim 1 requires a supply unit configured to supply ablation energy to a material and a stimuli-responsive substance configured to change state "if a temperature of said material increases above an upper threshold temperature due to at least a portion of said ablation energy *passing through* said stimuli-responsive substance into the material," and independent claim 15 requires, *inter alia*, "ablation energy *passing through* said stimuli-responsive substance into the material." Appeal Br. 19–20 (Claims App.) (emphasis added).

According to Appellants, the phrase "passing through" refers to "a physical property [of stimuli-responsive material 3] of allowing ablation energy to pass through stimuli-responsive material 3' without being deflected from a straight path (i.e., scattered). Reply Br. 9. Thus, Appellants contend that the phrase "passing through" requires that "the ablation energy enters and exits stimuli-responsive substance 3' in the same direction." *Id.* at 10. Appellants assert that in contrast, in the embodiments

of Mattiuzzi's Figures 7 and 8, ablation energy passing into the tips is "laterally outwardly diffused to the target material." Appeal Br. 12. More specifically, Appellants contend that in the embodiment of Mattiuzzi's Figure 8, "ablation energy does not pass through any of the segments 1-4 into the adjacent target material, but conditionally passes through one or more intermediate segments 2-4 until such time the ablation energy is laterally diffused into the target material by the tip 1 or an adjacent distal segment." *Id.* Thus, Appellants argue that "[u]nder no circumstances does ablation energy pass through tip 1 [of Matiuzzi's Figures 7 and 8 embodiments] into the target material" because "a portion of the target material adjacent a front surface of the distal tip never receives ablation energy." *Id.* at 13.

Although the Specification should be used to interpret the meaning of a claim, it is improper to confine the claims to the embodiments found in the Specification. *In re Trans Texas Holdings Corp.*, 498 F. 3d 1290, 1299 (Fed. Cir. 2007) (citations omitted). We must be careful not to read a particular embodiment appearing in the written description into the claim if the claim language is broader than the embodiment. *See Superguide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004). In this case, we agree with the Examiner that "[n]owhere in independent claims 1 and 15 do[] the claim[s] recite enter and exit the substance in the same direction," but merely "recite[] 'passing through'." Ans. 14. It is well established that limitations not appearing in the claims cannot be relied upon for patentability. *In re Self*, 671 F.2d 1344, 1348 (CCPA 1982).

Appellants' Specification does not assign or suggest a particular definition to the phrase "passing through" and therefore, it is appropriate to consult a general dictionary definition of the terms "pass" and "through" for guidance in determining the ordinary and customary meaning of the claimed phrase as viewed by a person of ordinary skill in the art. *See Comaper Corp. v. Antec, Inc.*, 596 F.3d 1343, 1348 (Fed. Cir. 2010). Ordinary and customary meanings of the terms "pass" and "through" is "to move in a path so as to approach and continue beyond something" and "a function word to indicate passage from one end or boundary to another," respectively. *Merriam Webster's Collegiate Dictionary* (10th ed. 1997). Hence, an ordinary and customary meaning of the phrase "passing through" is to move in a path from one boundary to another. *See also* Adv. Act. 2 ("The phrase 'passing through' is reasonably interpreted as moving in one side and out of the other side.'") (transmitted July 16, 2013). Such an interpretation of the phrase "passing through" is consistent with Appellants' Specification, which describes "laser energy supplied by supply unit 2" as "passing through the element 2' and the container 3" and "deposited into the material 4." Spec. 8, ll. 32–34. Hence, as Appellants' Specification does not exclude lateral transmission of ablation energy, we agree with the Examiner that an ordinary and customary meaning of the phrase "passing through" "does not preclude passing through by exiting through the sides." Ans. 14.

As such, the Examiner is correct in finding that because Mattiuzzi discloses laser light (electromagnetic radiation) entering stimuli-responsive material 601 at a most distal segment 1 and exiting from its sides. Mattiuzzi discloses passing radiation through a stimuli-responsive material and into a

target material, as called for by each of independent claims 1 and 15. *See id.*; *see also* Final Act. 6–7 (citing Mattiuzzi, p. 31, l. 24–p. 32, l. 21) (transmitted Apr. 29, 2013). Similarly, in the embodiment of Mattiuzzi's Figure 7 that includes an "outwardly diffusing" irradiating tip in combination with a covering, laser light (electromagnetic radiation) enters the stimuli-responsive covering and exits from its sides. *See* Mattiuzzi, p. 31, l. 14–p. 32, l. 6; *see also, e.g.*, Reply Br. 12.

In conclusion, for the foregoing reasons, we sustain the rejection under 35 U.S.C. § 102(b) of claims 1 and 15 as anticipated by Mattiuzzi.

Appellants do not present any other substantive arguments with respect to the rejection of dependent claims 2, 4, 8, and 13. *See* Appeal Br. 13–14; Reply Br. 15–16. Accordingly, for the same reasons as discussed *supra*, we likewise sustain the anticipation rejection of these claims.

Rejection II

The Examiner finds that Goodman discloses all the limitations of independent claims 1 and 15, but "Goodman does not specify that the stimuli-responsive substance change[s] its state due to change in temperature." Final Act. 12. Nonetheless, the Examiner finds that "[s]ensor layer 82 as explained by Gershenzon et al., is YBaCuO and the graph [of Gershenzon's Figure 1] depicts [that a] change of temperature causes a corresponding change in conductivity of the sensor element." *Id.* Thus, according to the Examiner, "the stimuli-responsive substance used in sensor layer 82 *inherently* changes from a first state to a second state if the

temperature [of] said material (tooth 72) increases above an upper threshold temperature due to laser pulse energy." *Id.* at 13 (emphasis added).

Appellants argue that although Goodman's layer 82 modulates a frequency of the laser pulses to a lower [pulse] rate," this cannot reasonably "be interpreted as a change in one state of layer 82 to another state of layer 82." Appeal Br. 16 (citing Goodman, col. 13, ll. 6–45); Reply Br. 17.

"It is well settled that a prior art reference may anticipate when the claim limitations not expressly found in that reference are nonetheless inherent in it. Under the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claimed limitations, it anticipates." *In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1349 (Fed. Cir. 2002) (citations and internal quotation marks omitted). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *In re Robertson,* 169 F.3d 743, 745 (Fed. Cir. 1999) (quoting *In re Oelrich*, 666 F.2d 578, 581 (Fed. Cir. 1991)). In this case, Goodman refers to sensor layer 82 as described in "an article by David R. Walt, appearing in the Proceedings of the IEEE, Volume **60**, No. 6, June 1992, at page 903." Goodman, col. 13, ll. 27–29. In contrast, the Examiner's rejection cites to an article by Gershenzon et al., appearing in Applied Physics Letters, Vol. 60, No. 7, February 17, 1992, p. 903–905. *See* Final Act. 10 (citing Goodman, col. 13, ll. 26–29). Therefore, Gershenzon's YBaCuO superconductive film is not the sensor referred to by Goodman, and the Examiner does not proffer any evidence to show that Gershenzon's YBaCuO superconductive film is the same as the sensor described by Walt.

As such, we do not agree with the Examiner's finding that "Goodman cites Gershenzon as an example of biological sensor 82." Ans. 15. We appreciate that Goodman's sensor layer 82 can be used to provide an indication of the temperature of the ablated tooth 72, and then modulate the frequency of laser pulses. *See* Goodman, col. 13, ll. 35–41. However, Goodman's modulation of the frequency of laser pulses is not the same as Gershenzon's change in conductivity of a YBaCuO superconductive film when its temperature increases above a threshold value. *See* Gershenzon, Fig. 1. Moreover, as there is no evidence in the record before us to establish that Goodman's sensor layer 82 is the same as Gershenzon's YBaCuO superconductive film, the Examiner fails to establish that Goodman's sensor layer 82 is configured to or does *necessarily* "change its state from a first state to a second state," as called for independent claims 1 and 15. Therefore, for the foregoing reasons, we do not sustain the rejection under 35 U.S.C. § 102(b) of claims 1, 2, 8, and 15 as anticipated by Goodman, as evidenced by Gershenzon.

Rejection III

In contesting the rejection of claim 3, Appellants rely on the arguments discussed *supra* in regard to Rejection I. *See* Appeal Br. 14; Reply Br. 16. Therefore, for the same reasons as discussed above, we sustain the rejection under 35 U.S.C. § 103(a) of claim 3 as unpatentable over Mattiuzzi and Richard.

SUMMARY

The Examiner's decision to reject claims 1, 2, 4, 8, 13, and 15 as anticipated by Mattiuzzi and to reject claim 3 as unpatentable over Mattiuzzi and Richard is affirmed.

The Examiner's decision to reject claims 1, 2, 8, and 15 as anticipated by Goodman, as evidenced by Gershenzon, is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED