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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MARTINUS BERNARDUS VAN DER MARK and
ANNA HENDRIKA VAN DUSSCHOTEN

Appeal 2019-001003
Application 14/439,734
Technology Center 2800

Before ROMULO H. DELMENDO, JAMES C. HOUSEL, and BRIAN D.
RANGE, *Administrative Patent Judges*.

RANGE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the
Examiner's decision to reject claims 1–18. We have jurisdiction under
35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37
C.F.R. § 1.42. Appellant identifies the real party in interest as Koninklijke
Philips N.V. Appeal Br. 2.

CLAIMED SUBJECT MATTER²

Appellant describes the invention as relating to an optical probe system arranged to convert a radiation beam into electrical energy. Spec. 2–5. The system could be used with minimally invasive surgical procedures. *Id.* at 1:8–13. In particular, the system seeks to address problems that may arise relating to transmission of data from sensors used for in-body imaging such as the need for small-cross section, flexibility, high data rate, and compatibility with MRI. *Id.* at 1:14–30. Claim 1, with emphasis added to certain recitations at issue, is illustrative:

1. An optical probe system, the system comprising:
 - a radiation source configured to emit a first radiation beam, said first radiation beam comprising optical energy and first data;
 - a photodetector configured to detect a second radiation beam; and
 - an optical probe having a distal end configured for insertion in a subject and a proximal end, the optical probe being at the proximal end optically connected to the photodetector and the radiation source, the optical probe comprising an optical guide connecting the distal end with the proximal end, the optical probe having at the distal end an optical converter circuit configured for insertion in the subject, said optical converter circuit comprising:
 - an application device configured for at least one of monitoring and manipulation at the distal end of the optical probe, the application device being configured to generate

² In this Decision, we refer to the Final Office Action dated December 1, 2017 (“Final Act.”), the Appeal Brief filed April 25, 2018 (“Appeal Br.”), the Examiner’s Answer dated September 21, 2018 (“Ans.”), and the Reply Brief filed November 16, 2018 (“Reply Br.”).

second data indicative of a functionality of the application device, and

an optoelectronic device configured to convert said first radiation beam received from the radiation source into electrical energy and to receive said first data, the first data being related to the functionality of the application device, the optoelectronic device further being configured to emit said second radiation beam towards the photodetector,

wherein the second radiation beam comprises the second data, and emission of the second radiation beam from the optoelectronic device is inducible by the first radiation beam received by the optoelectronic device, and

wherein the optical converter circuit is powerable by said electrical energy in the first radiation beam.

Appeal Br. 19–20 (Claims App.).

REJECTION AND REFERENCES

On appeal, the Examiner maintains the rejection of claims 1–18 under 35 U.S.C. § 103(a) as obvious over Cucci et al., US 5,528,409, June 18, 1996 (“Cucci”), in view of Tatum et al., US 7,831,152 B2, Nov. 9, 2010 (“Tatum”).

OPINION

We review the appealed rejections for error based upon the issues identified by Appellant and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential), *cited with approval in In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) (“[I]t has long been the Board’s practice to require an applicant to identify the alleged error in the examiner’s rejections.”). After considering the evidence presented in this Appeal and each of Appellant’s arguments, we are not

persuaded that Appellant identifies reversible error. Thus, we affirm the Examiner's rejections for the reasons expressed in the Final Office Action and the Answer. We add the following primarily for emphasis.

Appellant presents arguments for claim 1 and another argument that applies to claims 2, 3, 17, and 18 (Appeal Br. 16–17) but otherwise does not present substantively distinct arguments for the claims. We therefore limit our discussion to claims 1 and 2. Claims 3, 17, and 18 stand or fall with claim 2, and the remaining claims stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv) (2013).

The Examiner rejects claim 1 as obvious over Cucci in view of Tatum. Final Act. 3. The Examiner finds that Cucci teaches an optical probe system having, for example, a radiation source 42 configured to emit a first radiation beam and a photodetector 26 configured to detect a second radiation beam. *Id.* (citing Cucci Fig. 1). The Examiner finds that Cucci teaches “an optoelectronic device (50, 64) configured to convert said first radiation beam received from the radiation source into electrical energy (68) and to receive said first data . . . the optoelectronic device further being configured to emit said second radiation beam (beam emitted by 64 through 22) towards the photodetector.” *Id.* at 3.

The Examiner finds that Cucci does not teach the optical probe configured for insertion in a subject. *Id.* at 4. The Examiner finds, however, that Tatum discloses a probe for insertion in a subject. *Id.* (citing Tatum Fig. 1). The Examiner also finds that Tatum teaches an “optical guide (16) configured to guide at least part of a first radiation beam (26) from the proximal end to the distal end and at least part of a second radiation beam (28) from the distal end to the proximal end wherein both are guided along

the same optical path in the optical guide in Fig[ure] 1.” *Id.* The Examiner determines that it would have been obvious to “insert an optical probe into a subject as disclosed by Tatum in the device of Cucci for purpose of using the probe in medical applications without a remote power source.” *Id.*

Appellant argues that Cucci does not teach that emission of the second radiation beam is inducible by the first radiation beam as claim 1 recites.

Appeal Br. 13. The preponderance of the evidence, however, supports the Examiner’s finding that Cucci teaches that the signal from optical fiber 20 (corresponding to the first radiation beam) “wakes up” the remote microcontroller and thus induces the signal from optical fiber 22 (corresponding to the claim second radiation beam). Ans. 2 (citing Cucci 5:8–17). Appellant’s argument is unpersuasive because Appellant does not address the cited portion of Cucci and does not persuasively rebut the Examiner’s finding.

Appellant also argues that Cucci does not disclose or suggest “that the very same device that receives the incoming radiation beam also emits the second radiation beam.” Appeal Br. 13. Appellant emphasizes that the first beam is received by photo-diode power converter 50 while LED transmitter circuit 64 emits the digital data. *Id.* The preponderance of the evidence, however, supports the Examiner’s position that power converter 50 and LED transmitter 64 are components of a single device. Ans. 2. Cucci Figure 1 establishes that photo-diode power converter 50 and LED transmitter 64 are both within remote interference module 18. Cucci Fig. 1; *see also id.* at 4:17–6:13. Appellant presents no argument why claim 1’s recitation of “device” should be construed so narrowly that Cucci’s remote interference module 18 with its various components is not a device.

In the Reply Brief, Appellant argues that Cucci's Power and Digital Data are provided through two different optical fibers 20 and 22 and that the recitations of claim 1 are, therefore, not met. Reply Br. 2–3. Claim 1, however, does not require that the two radiation beams travel along one path. Also, Appellant's argument regarding Cucci alone is unpersuasive because the Examiner finds that Tatum teaches first and second radiation beams being guided along one optical path. Final Act. 4 (citing Tatum, Fig. 1). Appellant does not persuasively dispute the Examiner's finding regarding Tatum and does not dispute the Examiner's rationale for combining the teachings of Tatum and Cucci.

Claim 2 recites, among other things, the system according to claim 1, "wherein said optical guide is configured to guide at least a part of the first radiation beam and at least a part of the second radiation beam along a same optical path in the optical guide." Appeal Br. 20 (Claims App.) In an argument similar to the Reply Brief argument that we address above, Appellant again argues that Cucci teaches two different fibers. Appeal Br. 16–17. This argument is unpersuasive because Appellant does not dispute the Examiner's finding that Tatum teaches this recitation and does not dispute the Examiner's rationale for combining the references' teachings.

Because Appellant's arguments do not identify harmful error, we sustain the Examiner's rejection.

CONCLUSION

In summary:

| Claims Rejected | 35 U.S.C. § | Reference(s)/Basis | Affirmed | Reversed |
|------------------------|--------------------|---------------------------|-----------------|-----------------|
| 1–18 | 103(a) | Cucci, Tatum | 1–18 | |

Appeal 2019-001003
Application 14/439,734

TIME PERIOD FOR RESPONSE

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

AFFIRMED