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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MICHAEL SIMMS SHULER

Appeal 2020-000792
Application 15/818,541
Technology Center 3700

BEFORE MICHAEL L. HOELTER, JEREMY M. PLENZLER, and LEE L. STEPINA, *Administrative Patent Judges.*

PLENZLER, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 21–27 and 29–40. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] We use the word Appellant to refer to "applicant" as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as J&M Shuler, Inc. Appeal Br. 2.

CLAIMED SUBJECT MATTER

The claims are directed to a wireless near-infrared spectrometry sensor system. Claim 21, reproduced below, is illustrative of the claimed subject matter:

> 21. A wireless near-infrared spectrometry sensor system comprising:
>
> a first sensor for monitoring healthy tissue;
>
> a second sensor for monitoring injured tissue of a compartment separate and different from the healthy tissue, the first sensor providing information relating to perfusion of an entire body while the second sensor provides information relating to perfusion specific to the injured tissue of the compartment;
>
> the second sensor detecting oxygenation levels of the compartment in a continuous manner;
>
> the first sensor detecting oxygenation levels of the healthy tissue in a continuous manner, the first sensor detecting systemic perfusion of the human body from the healthy tissue; and
>
> a first alarm being activated to indicate a potential acute compartment syndrome when oxygenation levels detected by the second sensor for the injured tissue of the compartment start decreasing in value compared to the oxygenation levels detected by the first sensor for the healthy tissue;
>
> wherein each first and second sensor comprise:
>
> a light source for emitting near-infrared energy into tissue;
>
> a light receiver for receiving the near-infrared energy after it exits the tissue;
>
> a portable energy source coupled to the light source and for supplying energy to the light source;
>
> a mechanism for activating the portable energy source, the portable energy source being inactive and not supplying energy to the light source until activated by the mechanism for activating the portable energy source, the mechanism for activating the

portable energy source comprising a material that is removed from a respective sensor to activate the portable energy source, the portable energy source providing continuous energy once activated by the mechanism for activating the portable energy source and providing the continuous energy until its depleted of energy;

a processing module coupled to the light source and for controlling the light source and processing readings in connection with the light source, the processing module monitoring an energy level of the portable energy source and generating a warning message if the energy level produced by the portable energy source falls below a predetermined threshold;

a wireless transceiver coupled to the processing module for at least one of transmitting and receiving information, wherein the light source emits near-infrared energy at predetermined intervals in order to conserve energy in the portable energy source, the sensor being assigned a unique identifier which may be transmitted by the transceiver, the unique identifier being permanent and unique to a sensor; and

a substrate for supporting the light source, portable energy source, the processing module, and wireless transceiver; the portable energy source comprises at least one of a battery, a capacitor, a thermoelectric generator, a kinetic energy transducer, electricity derived from RF energy, and any combination thereof; the portable energy source having a physical size which is substantially smaller than the substrate for supporting the light source, the processing module, and wireless transceiver; wherein the first and second sensor each comprises an adhesive material to securely fasten the first sensor to the healthy tissue and the second sensor to the injured tissue; and

the light source of the first sensor being activated at different times relative to the light source of the second sensor in order to substantially reduce any optical interference between the first sensor and second sensor when readings are taken from respective sensors; each processing module of a sensor determining if its wireless transceiver is within range for establishing communications, each processing module of a

sensor activating a second alarm if a wireless transceiver is out of range for establishing communications.

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Ferguson	US 6,454,708 B1	Sept. 24, 2002
Bomba	US 2005/0137464 A1	June 23, 2005
Drinan	US 2006/0058593 A1	Mar. 16, 2006
Kern	US 2007/0199262 A1	Aug. 30, 2007
Meyer	US 2008/0081978 A1	Apr. 3, 2008
Shuler	US 2008/0208011 A1	Aug. 28, 2008
Greiner ’595	US 2009/0118595 A1	May 7, 2009
Greiner ’879	WO 2005/122879 A1	Dec. 29, 2005

REJECTIONS

Claims 21, 24–27, 29–36, 38, and 40 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shuler, Drinan and/or Bomba, Greiner ’595 and ’879 (“Greiner”), and Kern.

Claims 22 and 37 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shuler, Drinan, Bomba, Greiner, Kern, and Ferguson.

Claims 23 and 39 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shuler, Drinan, Bomba, Greiner, Kern, and Meyer.

OPINION

Appellant presents argument for claim 21. Appeal Br. 13–40. Appellant addresses claim 36 under a separate heading, but simply reproduces the language of claim 36 and reasserts the arguments presented regarding claim 21. *Id.* at 40–43. Appellant relies on the argument related to independent claims 21 and 36 for the patentability of claims 24–27, 29–35, 38, and 40, which each depend from claim 21 or claim 36. *Id.* at 43.

Appellant's contentions do not apprise us of Examiner error because they do not address the actual findings or reasoning provided by the Examiner. Appellant contends that the "Examiner . . . is improperly combining various exemplary embodiments of the prior art, especially those found in the Drinan reference, which is in violation of established PTAB precedent." Appeal Br. 14. Initially, we note that the "precedent" cited by Appellant is a non-precedential decision denying institution of *inter partes* review. Moreover, that decision was decided based on the particular facts of that case, which Appellant makes no attempt to compare to the facts before us in this appeal.

The Examiner proposes modifying the teachings of Shuler based on those from the other cited references. *See* Final Act. 3–10. Appellant's contentions regarding modifications to the teachings of those other cited references are misplaced and not persuasive of error. Appellant discusses the intended purposes of Drinan and Bomba, ultimately contending that proposed modifications to those references made by the Examiner render those references unsatisfactory for their intended purposes. *See* Appeal Br. 20–26, 31–34 (citing Dr. Shuler's Declaration under 37 C.F.R. § 1.132[2]). Those contentions are not persuasive because they address issues that are not the basis for the Examiner's rejection. *See, e.g.*, Ans. 5 (noting that "the 'prior art being modified' in the rejection of record is Shuler" when addressing Appellant's contentions related to Drinan), 7 (again explaining

[2] Appellant does not include the Declaration with the Appeal Brief, nor does Appellant reference any particular portion of that declaration. We understand Appellant to be referring to the declaration entered December 19, 2018 ("the Shuler Declaration").

that "[a]s noted above Shuler is the prior art invention being modified in the rejection of record" when addressing Appellant's contentions regarding Bomba).

Appellant's only contention regarding the proposed modification of Shuler's teachings is with respect to that involving the teachings of Drinan. Appeal Br. 34–36. Specifically, Appellant contends that "one of ordinary skill in the art would not be motivated in any way to combine the teachings of references in order to make a patient more ambulatory or movable while the patient is being monitored for a potential acute compartment syndrome." *Id.* at 36 (citing the Shuler Declaration without reference to any particular portion of that declaration). This is not persuasive of error because, as the Examiner notes in the Answer, "monitoring for ACS is not limited specifically to leg injuries . . . and Appellant's own disclosure indicates that ACS commonly develops in locations other than the legs (pg. 103, lines 8–17, where ACS commonly develops in the forearm)." Ans. 6. Further, as the Examiner additionally explains, "there is no clear discouragement for . . . enabling said individual to be moved within a hospital for additional testing, imaging, operations; permitting said individual to go to the restroom; permitting said individual to more freely move about within his/her bed; etc. while continually monitoring for ACS." *Id.* Without further response from Appellant, we are not apprised of Examiner error.[3]

Appellant's discussion of Greiner does not allege any particular error in the Examiner's findings based on Greiner or the proposed modification to Shuler's teachings based on those findings. *See* Appeal Br. 26–27.

[3] Appellant did not file a Reply Brief in response to the Examiner's Answer.

Appellant contends that Kern is non-analogous art. Appeal Br. 36–40. "A reference qualifies as prior art for an obviousness determination under § 103 only when it is analogous to the claimed invention." *In re Klein*, 647 F.3d 1343, 1348 (Fed. Cir. 2011) (citing *Innovention Toys, LLC v. MGA Entm't, Inc.*, 637 F.3d 1314, 1321 (Fed. Cir. 2011), and *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004)).

> Two separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.

In re Klein, 647 F.3d at 1348 (quoting *In re Bigio*, 381 F.3d at 1325). Appellant contends that "[t]he Kern reference would not have logically commended itself to Dr. Shuler's attention in considering his problem outlined on page 8, line 32 through page 9, line 14 of the present application as filed." Appeal Br. 38. Appellant again references the Shuler Declaration, generally, and without citation to any specific portion, in support of its contentions. *See id.*

The Examiner responds that "Appellant does not indicate which of these problems specifically is addressed by each processing module being configured for determining if its wireless transceiver is within range for establishing communications and activating an alarm if its wireless transceiver is out of range for establishing communications," which "[are] the feature(s) that Kern is relied upon to teach." Ans. 9. Nevertheless, the Examiner identifies one of the problems noted by Appellant as the most relevant to the features Kern is cited for, namely, "the problem[] noted by Appellant [a]s the need to monitor multiple compartments 'in a continual

and orchestrated manner by a single system.'" *Id.* The Examiner finds that Kern teaches "monitoring a plurality of vital sign sensors . . . by a single system . . . in a clinical setting" and includes "embodiment(s) wherein said sensors communicate with the system wirelessly, [with] a limited range in which these elements can communicate." *Id.* The Examiner further finds that "one of ordinary skill in art would readily appreciate that continuous monitoring, such as the monitoring taught and/or suggested by Shuler, could only occur within this limited range" and "Kern teaches/suggests providing said sensors with an alarm which may be triggered in the event the patient carrying the at least one sensor moves outside the wireless range of the associated wireless communication link." *Id.* Based on those findings, which are unrebutted by Appellant, the Examiner determines that Kern is analogous art. With no response to these findings, we are not apprised of Examiner error.

For the reasons explained above, Appellant fails to apprise us of error in the Examiner's rejections.

CONCLUSION

The Examiner's rejections are affirmed.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
21, 24–27, 29–36, 38, 40	103	Shuler, Drinan, Bomba, Greiner '595, Greiner '879, Kern	21, 24–27, 29–36, 38, 40	

22, 37	103	Shuler, Drinan, Bomba, Greiner '595, Greiner '879, Kern, Ferguson	22, 37	
23, 39	103	Shuler, Drinan, Bomba, Greiner '595, Greiner '879, Kern, Meyer	23, 39	
Overall Outcome			21–27, 29–40	

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