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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte FRANCIS MAISSANT, DANIEL RONNOW, and
SIMON BARAKAT

Appeal 2015-001477
Application 12/189,147
Technology Center 3600

Before JENNIFER D. BAHR, LINDA E. HORNER, and
BRANDON J. WARNER, *Administrative Patent Judges*.

BAHR, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Francis Maissant et al. (Appellants) appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1, 17, 20, 21, 23, and 25 under 35 U.S.C. § 103(a) as unpatentable over Scott (US 2007/0179713 A1, pub. Aug. 2, 2007), Ray (US 7,561,493 B2, iss. July 14, 2009), and Park, Jr. (US 4,375,679, iss. Mar. 1, 1983) (hereafter "Park"); and rejecting claims 2–5, 14, 15, and 26 under 35 U.S.C. § 103(a) as unpatentable over Scott, Ray, Park, and one of Bednar (US 5,121,362, iss. June 9, 1992) and Grice (US 4,656,615, iss. Apr. 7, 1987). We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM-IN-PART.

THE CLAIMED SUBJECT MATTER

Claim 17, reproduced below, is illustrative of the claimed subject matter.

17. A self-contained seismic sensing module having a single housing that contains:
- a seismic sensing element;
 - a processor; and
 - an interface coupled to the processor and to be coupled to an external network,
- wherein the processor is configured to:
- generate an electrical test signal applied to the seismic sensing element,
 - receive a response, to the electrical test signal, from the seismic sensing element, and
 - determine a characteristic of the seismic sensing module according to the response, wherein the determined characteristic comprises a polarity of wired connections to the seismic sensing element.

DISCUSSION

Rejection I—Obviousness based on Scott, Ray, and Park

Claims 1, 17, 20, 23, and 25

Appellants rely on the same arguments presented for patentability of independent claim 17 in contesting the rejection of independent claims 1 and 25. *See* Appeal Br. 5–11. Appellants do not assert any separate arguments for patentability of dependent claims 20 and 23. *See id.* We select claim 17 as representative, with claims 1, 20, 23, and 25 standing or falling with claim 17. *See* 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner finds that Scott discloses a seismic sensing module, substantially as claimed, including “a seismic sensing element (G) and a

processor (20) that generates an electrical test signal . . . applied to the seismic sensing element . . . and receives a step response, to the input step voltage, from the seismic sensing element.” Final Act. 2 (citing Scott, para. 25; Fig. 2). The Examiner also finds that Scott discloses that “[t]he response of a reference sensor to the test signal is determined and the responses of the reference sensor and sensing element (G) are compared.” *Id.* The Examiner acknowledges that Scott does not disclose that the processor is configured to determine a polarity of wired connections to the seismic sensing module, or that the processor is contained in a single housing with the seismic sensing element. *See id.* at 2–3. However, the Examiner finds that Park discloses “that comparing the response of a sensor being tested (i.e, geophone G of Scott . . .) to a reference sensor is done for sensor polarity determinations to be ascertained.” *Id.* at 3 (citing Park, col. 2, ll. 5–8). The Examiner determines that “it would be obvious to one of ordinary skill in the art that the processor of Scott . . . would be used to determine seismic sensing element polarity from the comparison of the responses of a test signal applied to a reference sensor and the seismic sensing element.” *Id.* The Examiner also finds that Ray discloses “the advantages of placing the seismic sensing element and processor within a single, self-contained housing,” and determines “that it would have been obvious to one of ordinary skill in the art to have modified Scott to configure the seismic sensing element (G) and a processor (20) within a single, self-contained housing.” *Id.* (citing Ray, col. 3, l. 45 to col. 4, l. 10).

Appellants argue that “test equipment 13 of Park cannot be the processor in the single housing of the seismic sensing module,” because “the test equipment 13 in Fig. 1A of Park is **outside** of the chamber 1.” Appeal

Br. 8; *see id.* at 7 (citing Park, col. 2, ll. 35–36). Appellants also argue that “[t]he **pressure** produced by the loudspeaker 2 in Park **cannot be the electrical test signal** generated by the processor contained in the single housing of the seismic sensing module.” *Id.* at 7–8. We are not persuaded by these arguments against Park because they are not responsive to the rejection as articulated by the Examiner. As discussed *supra*, the Examiner does not rely on Park for teaching a processor configured to generate an electrical test signal, but instead relies on Scott for teaching this feature. *See* Final Act. 2. Likewise, the Examiner does not rely on Park for teaching a single housing that contains a seismic sensing element and a processor, but instead relies on Ray for teaching this feature. *See id.* at 3. Nonobviousness cannot be established by attacking references individually when the rejection is predicated upon a combination of prior art disclosures. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

Appellants argue that Ray discloses the “use of one geophone that functions as an energy source and the other geophone that functions as an energy receiver,” and thus “fails to provide any teaching or hint of a single housing that contains a seismic sensing element and a processor, where the processor is configured according to claim 17.” Appeal Br. 9 (citing Ray, col. 7, ll. 24–26). This argument is not convincing because Ray discloses a seismic recording unit that “is self-contained such that all of the electronics are disposed within or on the case.” Ray, col. 4, ll. 4–5. Specifically, Ray discloses self-contained pod 10 that includes case 12 and internal compartment 16 containing at least one geophone 18, clock 20, power source 22, control mechanism 23, and seismic data recorder 24. *See id.*, col. 6, ll. 13–20. Appellants do not specifically address the Examiner’s

determination that, based on the teachings of Ray, it would have been obvious to modify Scott's system such that the processor and seismic sensing element are contained in a single housing. *See* Final Act. 3. Furthermore, we are not persuaded by Appellants' argument that Ray fails to disclose a processor *configured according to claim 17* because the Examiner does not rely on Ray for teaching this feature. Instead, the Examiner relies on the teachings of Scott and Park, and determines that the combination of teachings renders obvious a processor configured as claimed. *See id.* at 2–3; *see also Merck*, 800 F.2d at 1097.

Appellants argue that one of ordinary skill in the art would have had no reason to combine the cited references as proposed by the Examiner. *See* Appeal Br. 9–10. In particular, Appellants assert that Park and Ray test seismic sensors “by producing either pressure (from a loudspeaker in Park) or vibration (from a geophone in Ray).” *Id.* at 9. According to Appellants, “[a] person of ordinary skill in the art would clearly not have found any reason to incorporate the loudspeaker 2 of Park or the energy source geophone of Ray into the arrangement shown in Fig. 2 of Scott, as doing so would render Scott inoperative for its intended purpose.” *Id.* at 9–10; *see id.* at 10 (Appellants asserting that Scott's “arrangement is incompatible with the use of a loudspeaker or energy source geophone”).

Appellants' argument is not convincing because it is not directed to the modification proposed by the Examiner in the rejection. The Examiner does not propose incorporating Park's loudspeaker 2 or Ray's geophone 18 into the system of Scott. As discussed *supra*, the Examiner's rejection relies on Park as providing evidence that it was known in the seismic sensing art at the time of the invention to compare the response of a tested sensor to the

response of a reference sensor in order to make polarity determinations, and relies on Ray for teaching advantages of containing a seismic sensing unit and a processor in a single housing. *See* Final Act. 3. Appellants do not specifically address the Examiner's reasoning articulated in support of the proposed modifications of Scott based on the specific teachings of Ray and Park. *See id.* Moreover, Appellants' argument appears to rely on bodily incorporation of specific structural details of the overall inventions disclosed by Park and Ray (i.e., loudspeaker and geophone) into Scott, which is not the standard for an obviousness rejection. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981).

Appellants present new arguments in the Reply Brief, namely, (1) "that the Examiner is ignoring specific teachings of the cited references that would have indicated that a person of ordinary skill in the art would not have been prompted to combine the cited references," and (2) that "the Examiner has used impermissible hindsight to piece together disparate elements of the cited references to perform a piecemeal combination in making the obviousness rejection." Reply Br. 3. These arguments are untimely, and Appellants do not present any evidence or explanation to show good cause why these arguments should be considered by the Board at this time. *See* 37 C.F.R. § 41.41(b)(2).

For the above reasons, Appellants' arguments do not apprise us of error in the Examiner's determination that the subject matter of claim 17 would have been obvious. Accordingly, we sustain the rejection of claim 17, and of claims 1, 20, 23, and 25 falling therewith, under 35 U.S.C. § 103(a) as unpatentable over Scott, Ray, and Park.

Claim 21

Claim 21, which depends from claim 17, recites, “a temperature sensor in the housing.” Appeal Br., Claims App. Appellants argue that “the Examiner cited generally to Ray, without pointing to any specific passage of Ray.” Appeal Br. 10; *see* Final Act 3 (the Examiner stating, “[p]er claim 21, *see* Ray”). Appellants assert that they have “thoroughly reviewed Ray, and can find no teaching or hint whatsoever that the pod shown in Ray includes a temperature sensor.” Appeal Br. 10. In this regard, we agree that “there is no mention whatsoever of a temperature sensor in Ray, much less a temperature sensor that is in the same housing as a seismic sensing element and a processor.” *Id.* Notably, the Examiner does not respond to this argument in the Answer. *See* Ans. 3–5. Thus, the Examiner fails to establish by a preponderance of the evidence that Ray discloses “a temperature sensor in the housing,” as called for in claim 21. Moreover, the Examiner does not articulate any additional findings or reasoning, or rely on any teaching of the remaining references, that would remedy the aforementioned deficiency in the Examiner’s findings with respect to Ray. Accordingly, we do not sustain the rejection of claim 21 under 35 U.S.C. § 103(a) as unpatentable over Scott, Ray, and Park.

Rejection II—Obviousness based on Scott, Ray, Park, and one of Bednar and Grice

In contesting the rejection of dependent claims 2–5, 14, 15, and 26, Appellants rely on the arguments presented for patentability of claims 1, 17, 20, 23, and 25. Appeal Br. 12. For the reasons discussed *supra*, Appellants’ arguments fail to apprise us of error in the rejection of claims 1, 17, 20, 23, and 25 as unpatentable over Scott, Ray, and Park. Accordingly, we likewise

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sustain the rejection of claims 2–5, 14, 15, and 26 as unpatentable over Scott, Ray, Park, and one of Bednar and Grice.

DECISION

The Examiner’s decision rejecting claims 1–5, 14, 15, 17, 20, 23, 25, and 26 is affirmed.

The Examiner’s decision rejecting claim 21 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). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART