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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ALDO P. DELLA SERA and ARNOLD KRAVITZ

Appeal 2018-005610
Application 14/211,693
Technology Center 2800

Before ROMULO H. DELMENDO, MONTÉ T. SQUIRE, and
JANE E. INGLESE, *Administrative Patent Judges*.

SQUIRE, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Appellant² appeals under 35 U.S.C. § 134(a) from the Examiner’s final decision rejecting claims 6–14, which are all of the claims pending in this application.³ We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ In this Decision, we refer to the Specification filed Mar. 14, 2014 (“Spec.”); Final Office Action dated Apr. 21, 2017 (“Final Act.”); Appeal Brief filed Nov. 20, 2017 (“Appeal Br.”); Examiner’s Answer dated Mar. 9, 2018 (“Ans.”); and Reply Brief filed May 9, 2018 (“Reply Br.”).

² We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies Technology Research, LLC and Southwire Company, LLC as the real parties in interest. Appeal Br. 2.

³ Claims 1–5 and 15–20 are cancelled. Appeal Br. 14, 16.

CLAIMED SUBJECT MATTER

Appellant's claimed subject matter relates to an interface for interconnecting a plurality of power sources such as photovoltaic (PV) solar panels, which includes a multi-channel micro-inverter. Spec. ¶¶ 1, 28; Abstract. Claim 6 illustrates the claimed subject matter on appeal and is reproduced below from the Claims Appendix to the Appeal Brief:

6. An apparatus for mapping and identifying performance for a solar panel array, the solar panel array comprising a plurality of solar panel groups and each solar panel group comprising a plurality of solar panels, the apparatus comprising:

a plurality of multi-channel micro-inverters, wherein each multi-channel micro-inverter comprises a plurality of micro-inverters corresponding to a plurality of numbered inverter ports, wherein each multi-channel micro-inverter is assigned to one of the plurality of solar panel groups, and wherein the numbered inverter ports of each respective multi-channel micro-inverter are configured to be connected to a single solar panel in an assigned solar panel group;

a trunk line connecting the plurality of multi-channel micro-inverters to a circuit breaker;

a polling circuit connected to the plurality of multi-channel micro-inverters through the trunk line and the circuit breaker, wherein the polling circuit is configured to generate a polling signal transmitted to each of the multi-channel micro-inverters upon closing the circuit breaker; and

wherein each multi-channel micro-inverter is configured to transmit data in response to the polling signal from the polling circuit after an elapsed time corresponding to a value associated with each of the multi-channel micro-inverters.

Appeal Br. 14 (key disputed claim language italicized and bolded).

REFERENCES

The Examiner relies on the following prior art references as evidence in rejecting the claims on appeal:

Name	Reference	Date
Fornage et al. (“Pat. ’056”)	US 2010/0263704 A1	Oct. 21, 2010
Fornage (“Pub. ’006”)	US 2013/0021006 A1	Jan. 24, 2013
Fornage (“Pat. ’275”)	US 9,165,275 B2	Oct. 20, 2015

REJECTION

On appeal, the Examiner maintains (Ans. 2) the following rejection: claims 6–14 rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Fornage Pat. ’056 in view of Fornage Pat. ’275 and Fornage Pub. ’006.

OPINION

The Examiner determines the combination of Fornage Pat. ’056, Fornage Pat. ’275, and Fornage Pub. ’006 suggests an apparatus satisfying the limitations of claim 6 and concludes the combination would have rendered the claim obvious. Ans. 2–4.

Regarding the “wherein each multi-channel micro-inverter is configured to transmit data in response to the polling signal from the polling circuit after an elapsed time corresponding to a value associated with each of the multi-channel micro-inverters” recitation of claim 6, the Examiner relies principally on Fornage Pat. ’275 for teaching or suggesting that limitation of the claim. *Id.* at 2–4, 6–7. In particular, the Examiner finds Fornage Pat. ’275 discloses a multi-channel micro-inverter configured to transmit data (data to controllers 108/114) in response to a polling signal (signal from

controllers 108/114) from a polling circuit (controllers 108/114) after an elapsed time (time elapsed to receive unique PV module identifier) corresponding to a value (unique PV module identifier of solar panels) associated with each of the multi-channel micro-inverters. *Id.* at 3–4, 7 (citing Fornage Pat. '275, Fig. 7 (steps 702–708), 10:9–28, 11:7–9).

Appellant argues the Examiner's rejection of claim 6 should be reversed because the cited art does not teach or suggest a multi-channel micro-inverter "configured to transmit data in response to the polling signal from the polling circuit after an elapsed time corresponding to a value associated with each of the multi-channel micro-inverters," as recited in the claim. Appeal Br. 7–8. In particular, Appellant contends that, in contrast to the claimed invention, none of the cited references teach or suggest the "after an elapsed time corresponding to a value associated with each of the multi-channel micro-inverters" recitation of the claim. *Id.* at 8–11; *see also* Reply Br. 2–5 (same).

Appellant further contends the Examiner has failed to provide reasoning, or explain adequately, why one of ordinary skill would have combined the teachings of the cited art to arrive at the claimed invention. *See* Reply Br. 5 (arguing the Examiner "***Fails to Establish How or Why the '275 Patent and '056 Patent are Being Combined***").

Appellant's argument is persuasive because, on the record before us, the Examiner has not established by a preponderance of the evidence that the cited art teaches or suggest a multi-channel micro-inverter "configured to transmit data in response to the polling signal from the polling circuit after an elapsed time corresponding to a value associated with each of the multi-channel micro-inverters," as required by the claim. *In re Oetiker*, 977 F.2d

1443, 1445 (Fed. Cir. 1992) (holding the examiner bears the initial burden of establishing a prima facie case of obviousness).

The portions of Fornage Pat. '275 the Examiner cites and relies upon in the rejection do not teach or suggest the “after an elapsed time corresponding to a value associated with each of the multi-channel micro-inverters” recitation of the claim. *See* Fornage Pat. '275, Fig. 7, 10:9–28, 11:7–9. Although Figure 7 of Fornage Pat. '275 describes a method for identifying components redeployed within a solar power system, including a master controller **114** coupled to a plurality of inverters (Fornage Pat. '275, Fig. 7, 11:35–45), the Examiner does not identify or direct us to any specific disclosure or discussion in the reference regarding the inverters being configured or configurable to transmit data after an elapsed time corresponding to a value associated with each of the inverters in the manner claimed. For example, as Appellant points out (Reply Br. 3), the Examiner does not identify or direct us to any teaching or suggestion in Fornage Pat. '275 of any delay or elapsed period of time between the receipt of a polling signal and the transmission of ID data that corresponds to a value associated with a respective micro-inverter, or any teaching that the apparatus is configured to operate in such manner.

Contrary to what the Examiner’s rejection seems to imply, as Appellant further points out (Reply Br. 3–4), the fact that there may be some inherent delay or elapsed period of time for Fornage Pat. '275’s master controller **114** to receive PV module identifier data, without more, does not necessarily mean or suggest that the time delay “corresponds to a value associated with each of the multi-channel micro-inverters,” as recited in the claim.

The Examiner also does not identify sufficient evidence or persuasively explain how or why one of ordinary skill in the art would have combined the teachings of the cited art to arrive at an apparatus satisfying the “after an elapsed time corresponding to a value associated with each of the multi-channel micro-inverters” recitation of the claim. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (requiring “reasoning with some rational underpinning to support the legal conclusion of obviousness”) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

In particular, at pages 3–4 and 6–7 of the Answer, the Examiner does not adequately explain why one of ordinary skill would have had reason to combine the teachings of Fornage Pat. ’056 and Fornage Pat. ’275 to arrive at the claimed invention. Although the Examiner asserts that “**Pat. ’056 discloses polling circuit but relies in Pat. ’275 for the details of the polling circuit**” (Ans. 3), the Examiner does not direct us to persuasive evidence or provide adequate technical reasoning to sufficiently support a finding that the polling circuits the Examiner alleges each of the references describes are identical, or provide any further discussion as to why one of ordinary skill would have been led to a multi-channel micro-inverter configured or configurable to transmit data in response to the polling signal from the polling circuit after an elapsed time corresponding to a value associated with each of the multi-channel micro-inverters in the manner claimed.

The fact that it may have been technically possible to configure a multi-channel micro-inverter to operate in such a manner, without more, does not necessarily mean or suggest it would have been obvious to one of ordinary skill in the art to do so. *See also Belden Inc. v. Berk-Tek LLC*, 805

F.3d 1064, 1073 (Fed. Cir. 2015) (“[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.”).

We, therefore, do not sustain the Examiner’s rejection of claim 6. Because claims 7–14 depend from claim 6, we also do not sustain the Examiner’s rejection of those claims.

Accordingly, we reverse the Examiner’s rejection of claims 6–14 under pre-AIA 35 U.S.C. § 103(a) as obvious over the combination of Fornage Pat. ’056, Fornage Pat. ’275, and Fornage Pub. ’006.

CONCLUSION

In summary:

Claim(s) Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
6–14	103(a)	Fornage Pat. ’056, Fornage Pat. ’275, Fornage Pub. ’006		6–14

REVERSED