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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHN T. PECH and BENJAMIN T. HARDER

Appeal 2019-000954
Application 14/260,819
Technology Center 3700

Before DANIEL S. SONG, STEFAN STAICOVICI, and
JEREMY M. PLENZLER, *Administrative Patent Judges*.

PLENZLER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ appeals under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1–3 and 5–10.² Final Act. 1. 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 Hamilton Sundstrand Corporation. Appeal Br. 2.

² Claim 4 is cancelled and claims 11–13 are withdrawn.

THE CLAIMED SUBJECT MATTER

Claims 1 and 6 are independent. Claims 2, 3, and 5 depend from claim 1. Claims 7–11 depend from claim 6. Claim 1 is reproduced below.

1. A turbine starter configured for use with a turbomachine, comprising:

a turbine starter housing defining a cavity, wherein the cavity is configured to hold a quantity of starter oil; and

a temperature sensor disposed within the cavity and configured to sense a temperature within the housing;

wherein the starter further includes a speed sensor for sensing a rotational speed of at least one rotating component of the starter, wherein the temperature sensor is disposed on the speed sensor within the cavity.

REJECTION

References	Basis	Claims
Mouton ³ , Fujiki ⁴ , and Schmidt ⁵	§ 103	1–3 and 5–10

OPINION

Appellant presents arguments for claims 1, 6, and 9, arguing claims 1 and 9 together (Appeal Br. 6–8), and presenting separate arguments for claim 6 (*id.* at 8–10).

Claims 1 and 9 each recite “a speed sensor for sensing a rotational speed of at least one rotating component of the starter.” The Examiner finds that Schmidt teaches this limitation and proposes modifying Mouton’s

³ US 4,779,413, issued Oct. 25, 1988.

⁴ US 7,387,101 B2, issued June 17, 2008.

⁵ US 7,448,220 B2, issued Nov. 11, 2008.

teachings accordingly. Final Act. 3–4; Ans. 2. In the Final Action, the Examiner finds that “Schmidt teaches (Fig. 2) a speed sensor (40) for sensing a speed of the shaft of the turbine starter.” Final Act. 3 (citing Schmidt 4:1–15). Appellant responds that although “[t]he Examiner alleges that Schmidt discloses a speed sensor for sensing speed of the shaft of the turbine starter . . . referring to Fig. 1 of Schmidt . . . the speed sensor 14 of Schmidt is not capable of sensing speed of the starter 6 as it is unconnected to the starter.” Appeal Br. 6. In the Answer, the Examiner explains that Appellant has failed to address the Examiner’s findings. *See* Ans. 2 (“The Appellant does not make any arguments regarding the elements cited by the examiner, specifically Fig. 2 of Schmidt and the speed sensor for the starter 40 (described in Col. 4 lines 1–15 of Schmidt).”). The Examiner is correct. Accordingly, we are not apprised of error in the Examiner’s findings related to Schmidt.⁶

Appellant additionally contends, without citation, that “[t]he Examiner even admits that none of the references disclose the speed sensor

⁶ In the Answer, when explaining Appellant’s failure to address the findings in the Final Action, the Examiner states that “[t]he speed sensor 40 senses the speed of the ‘APU’ (see Fig. 2), or Auxiliary Power Unit” and “[t]he ‘APU’ functions as the turbine starter (see Schmidt Col. 1 lines 11-18).” In the Reply Brief, Appellant provides new argument, but presents that argument as a response to allegedly new basis to the rejection from the Examiner. *See* Reply Br. 2 (“the Examiner, for the first time, argues that an entire auxiliary power unit (APU) of Schmi[d]t is analogous to the claimed starter,” but “such a statement is a new ground of rejection.”). The basis for the Examiner’s rejection did not change in the Answer. Engine speed detector 40 in Schmidt (relied on by the Examiner in the Final Action as noted above), detects APU speed. *See, e.g.*, Schmidt Fig. 2. We do not consider the new argument raised for the first time in the Reply Brief. *See* 37 C.F.R. § 41.41(b)(2).

within the starter but alleges that this is an obvious rearranging of parts.” Appeal Br. 7. Rather than address the rationale provided by the Examiner, which Appellant acknowledges (i.e., “rearrangement of parts”)⁷, Appellant contends that “[t]here is simply no disclosure, suggestion, or motivation provided in any of the references to include a speed sensor within the starter, and thus, it is clear that the Examiner uses impermissible hindsight.” *Id.* This does not apprise us of error, as there is no requirement that the references, themselves, suggest the proposed modifications. Because Appellant provides no argument addressing the rationale provided by the Examiner, we are not apprised of Examiner error.

Similar to claim 1, claim 6 recites “a temperature sensor disposed within the cavity and configured to sense a temperature within the housing.” As in the rejection of claim 1 (Final Act. 3), the Examiner finds that Fujiki teaches this feature in connection with the rejection of claim 6 and proposes modifying Mouton’s teachings accordingly (*id.* at 5–6). The Examiner finds that “[i]n an art solving the same problem of oil cooling as Mouton, Fujiki teaches an oil level sensor for detecting an oil level,” and, more specifically, Fujiki teaches (Fig. 1) an oil level sensor (12) configured to sense an oil temperature and level within the oil housing (11).” Final Act. 4. Although Appellant does not dispute this same finding in connection with claim 1, Appellant contends that “[w]ith respect to independent claim 6 . . . Fujiki is clearly not analogous art because it is neither (1) in the same field of endeavor to turbomachine starters as in Mouton, nor is it (2) reasonably

⁷ The Examiner explains that “rearranging parts of an invention involves only routine skill in the art.” Final Act. 4 (citing *In re Japikse*, 181 F.2d 1019 (CCPA 1950) and MPEP 2144.04).

pertinent the same problem encountered by *the inventor of Mouton*.” Appeal Br. 8 (emphasis added).

“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 *Innovation 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 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).

In the Answer, the Examiner clarifies that Fujiki is analogous art because “Fujiki is in the art of engine oil cooling, and solves the same problem of determining an oil level in an engine oil compartment.” Ans. 2. That is, the Examiner finds that Appellant’s field of endeavor is “engine oil cooling” and the problem addressed by Appellant is “determining an oil level in an engine oil compartment,” and finds that Fujiki is both in this field of endeavor and reasonably pertinent to this problem. *Id.* Appellant responds by reiterating that “Fujiki is neither in the same field of endeavor or reasonably pertinent to the problem faced by *the inventor of Mouton*.” Reply Br. 3 (emphasis added). The Examiner has the better position, at least with respect to whether Fujiki is reasonably pertinent to the particular problem with which *the inventor* of the pending application is involved.

Initially, we note that Appellant applies the wrong test for analogous art. The question is not whether the references are analogous to one another, but, rather, whether a reference is within *the inventor's* field of endeavor or reasonably pertinent to the particular problem with which *the inventor* of the pending application is involved. Notably, Appellant does not dispute the Examiner's finding regarding the particular problem with which the inventor is involved ("determining an oil level in an engine oil compartment") or the finding that "Fujiki . . . solves the same problem of determining an oil level in an engine oil compartment." Ans. 2. The Specification supports the Examiner's determination, explaining, for example, that "[l]eaks in the starter and/or general oil consumption can result in a low oil level," and "[a]s a precaution, the starter must be serviced after a certain amount usage to check and/or replace the oil in the starter." Spec. 1:12–14. Fujiki, likewise, relates to "detecting an oil level." Fujiki, Abstract. For at least these reasons we are not apprised of Examiner error based on Appellant's contentions related to Fujiki being non-analogous art.

Appellant further contends that "Fujiki does not disclose, and even teaches away from, sensing the temperature within the housing and determining if the sensed temperature indicates a sufficient quantity of oil." Appeal Br. 8. Appellant contends that "Fujiki discloses a significantly more complicated system where the rate of temperature change of a heated element is measured, not the temperature within the housing." *Id.* Appellant contends that "Fujiki only discloses determining thermal dissipation." *Id.* at 9. The Examiner responds that Fujiki's thermal dissipation determination corresponds to sensing temperature. Ans. 3. Appellant responds by simply alleging, without evidence or explanation, that "[s]ensing a dissipation rate

of input heat is not the same as sensing temperature.” Reply Br. 3. Based on the record before us, the Examiner has the better position. As the Examiner explains, “Fujiki teaches a sensor that senses oil temperature by measuring heat dissipation of an element over time,” where “[t]he heat dissipates more slowly when the temperature of the oil is high, and the heat dissipates more quickly when the temperature of the oil is low.” Ans. 3. Appellant provides no persuasive explanation as to why a temperature sensor must sense an absolute temperature directly, rather than determine a heat dissipation over time, which indirectly senses a temperature.

Unlike claim 1, independent claim 6 additionally requires “a computing apparatus configured to receive signals from the temperature sensor and to determine if the temperature within the housing indicates a sufficient quantity of starter oil.” The Examiner finds that “Schmidt teaches (Fig. 2) a computing apparatus (44) configured to receive signals from a temperature sensor” and that “[t]he computing apparatus does not allow the turbine to start unless the temperature is at a predetermined level.” Final Act. 4–5.

Appellant responds that “Schmidt has nothing to do with a turbomachine starter” and “[f]or similar reasons as presented above, Fujiki is also not combinable with Schmidt as they are not analogous.” Appeal Br. 9. This is unpersuasive because, as explained above, the question is not whether Schmidt and Fujiki are analogous to one another. Appellant does not dispute that Schmidt is within the inventor’s field of endeavor or reasonably pertinent to the particular problem discussed above with which the inventor is involved.

Appellant additionally contends that “Schmidt simply is not configured to determine a sufficient quantity of starter oil.” Appeal Br. 9. That, too, is unpersuasive of Examiner error because the Examiner does not rely on a finding that Schmidt provides such a teaching. *See* Final Act. 4–5 (“Schmidt teaches (Fig. 2) a computing apparatus (44) configured to receive signals from a temperature sensor. The computing apparatus does not allow the turbine to start unless the temperature is at a predetermined level.”); *see also* Ans. 3 (“Schmidt is provided merely to teach a computing apparatus 44 that is configured to receive signals from a temperature sensor.”).

Accordingly, we sustain the Examiner’s decision to reject claims 1–3 and 5–10.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	References	Affirmed	Reversed
1–3 and 5–10	§ 103	Mouton, Fujiki, and Schmidt	1–3 and 5–10	
Overall Outcome			1–3 and 5–10	

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

AFFIRMED