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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TAKAFUMI KONO, TAKASHI SHIMAOKA,
MITSUNORI EHARA, and KOICHIRO FUSHIYA¹

Appeal 2018-004391
Application 14/583,945
Technology Center 3600

Before MICHELLE R. OSINSKI, JILL D. HILL, and LISA M. GUIJT,
Administrative Patent Judges.

OSINSKI, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's
decision rejecting claims 1, 3–8, and 17–22² under 35 U.S.C. § 102(a)(1) as

¹ Mitsubishi Aircraft Corporation (“Appellant”) is the Applicant as provided
in 37 C.F.R. § 1.46 and is identified as the real party in interest. Appeal
Br. 2.

² Claim 2 is cancelled. Appeal Br. 27 (Claims App.). Claims 9 and 12–16
are allowed, and claims 10 and 11 are objected to as being dependent upon a
rejected base claim, but would be allowable if rewritten in independent form
including all of the limitations of the base claim and any intervening claims.
Final Act. 6.

anticipated by Trey (US 5,469,147, issued Nov. 21, 1995). We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

THE CLAIMED SUBJECT MATTER

Claims 1 and 21 are independent. Claim 1 is reproduced below.

1. A fire extinguishing system of an aircraft comprising a nozzle device that is provided on an installation member forming a compartment of the aircraft, wherein the nozzle device includes:
 - a nozzle that is passed into an insertion hole formed in a nozzle installation section, said nozzle installation section provided on the installation member, and said nozzle discharges a fire extinguishing agent supplied from a supply source into the compartment; and
 - a lid member that closes a gap between the nozzle and the nozzle installation section, wherein the gap is a continuous gap provided along an entire circumference of the nozzle, said gap being provided by said insertion hole being formed with an inner diameter that is larger than an outer diameter of said nozzle; and
 - wherein the nozzle is not rigidly coupled with the nozzle installation section.

OPINION

Claims 1, 3–8, 17–20, and 22

The Examiner finds that Trey discloses all of the limitations of independent claim 1 including, in relevant part, that the nozzle is not rigidly coupled with the nozzle installation section. Final Act. 2–3. In particular, the Examiner finds that “nozzle 5 is not rigidly coupled to the nozzle installation section because lid member [or sealing ring] SR is pliable and

permits relative movement between nozzle 5 and nozzle installation section 7.” *Id.* at 3 (citing Trey, Figs. 3–4); *see also* Ans. 8 (emphasis omitted) (“[T]he only connection between the nozzle 5 and nozzle installation section 7 . . . is a pliable sealing ring, gasket or caulking which is present merely to prevent smoke from passing through the hole ‘O’ and not for any structural rigidity between the parts. This allows for relative movement between the parts with little resistance.”).

Appellant argues that Trey “fails to specify whether its nozzle 5 i[s] rigidly coupled or not” (Reply Br. 4) and, more particularly, “does not disclose that sealing ring SR is pliable,” only that the subsequent seal of “caulking” is pliable (Appeal Br. 17–18 (citing Trey 4:35–37)). Appellant also argues that “Trey’s disclosure is unclear and ambiguous at best with regard to the shape and position of the sealing ring SR” (Appeal Br. 18) and that Figures 3 and 4 of Trey “show that the hole O shares an outline with nozzle 5, [such that] the skilled person would understand that the rigid connection is a result of a form-fitting design, caused by the nozzle 5 and the hole O having substantially the same diameter” (*id.* at 13) (emphasis omitted). Appellant also argues that “[o]ne can easily conceive of ways that a sealing ring can be provided to seal a rigid connection.” *Id.* at 18.

The Examiner has not demonstrated that Trey *explicitly* discloses that the sealing ring or gasket inserted into the hole O is pliable. That is, we agree with Appellant that Trey explicitly discloses *only* that “it is also possible to provide a *subsequent* seal with the aid of a pliable sealing material such as caulking.” Trey 4:35–37 (emphasis added). The Examiner has also not demonstrated that Trey *implicitly or inherently* discloses that the sealing ring or gasket inserted into the hole O is pliable by providing any

evidence or persuasive technical reasoning to support such a determination. Without further evidence or explanation, one of ordinary skill in the art can only speculate as to (i) the type of material of the sealing ring or gasket, (ii) the dimensions of the sealing ring or gasket, and (iii) whether the material and dimensions of the sealing ring or gasket allow for relative movement between the nozzle and the nozzle installation section. Thus, one of ordinary skill in the art can only speculate whether nozzle 5 is not rigidly coupled to the nozzle installation section. Such speculation is insufficient to support the anticipation rejection under review.³

For the foregoing reasons, we find that the Examiner erred in finding that Trey discloses all of the limitations of independent claim 1. We do not sustain the rejection of claim 1 under 35 U.S.C. § 102(a)(1) as anticipated by Trey. We also do not sustain the rejection of claims 3–8, 17–20, and 22, which depend directly or indirectly from independent claim 1.

Claim 21

Independent claim 21 does not recite that the nozzle is not rigidly coupled with the nozzle installation section. Appeal Br. 31 (Claims App). Independent claim 21 recites, in relevant part, “a lid member that closes a gap between the nozzle and the nozzle installation section, wherein the lid member is combined with or connected to the nozzle installation section.” *Id.* The Examiner finds that Trey discloses all of the limitations of independent claim 21, including “a lid member (SR) that closes a gap between the nozzle and the nozzle installation section.” Final Act. 5 (citing

³ We note that any consideration of what one of ordinary skill in the art may deem obvious regarding the material and dimensions of the gasket is immaterial to the anticipation rejection made here and before us for review.

Trey 4:29–37, Figs. 1–4). In particular, the Examiner finds that “inner diameter of insertion hole O is larger than the outer diameter of the nozzle 5 to allow nozzle 5 to be inserted through the insertion hole O and allow lid member SR [sealing ring] to fit between insertion hole O and nozzle 5.” *Id.* at 3 (citing Trey 4:29–35); *see also* Ans. 7 (“Since a sealing ring, gasket or caulking is inserted into the hole between the nozzle and the installation section of Trey . . . , a gap is present between the nozzle and the installation section at least at the space occupied by the sealing ring SR.”).

Appellant argues that a “skilled person would understand [from Figures 3 and 4] that there is no gap between the nozzle 5 and the hole O” and “Trey [does] not make any mention of the word ‘gap’ or any equivalents.” Appeal Br. 24 (emphasis omitted). Appellant also argues that Trey’s description of nozzle 5, insertion hole O, and sealing ring SR is inconsistent. *Id.* at 8–13, 24. More particularly, Appellant argues that Figure 3 suggests that SR is “‘hidden’ within O,” whereas Figure 4 suggests that SR “‘surround[s]’ O,” in which case SR must be “located on top of the bottom 10” “as the diameter of the area indicated SR well exceeds the diameter indicated as O.” *Id.* at 11–12. Appellant also points to the Examiner-identified portion of Trey, i.e., column 4, lines 29–35, with the “first sentence . . . seem[ing] to indicate that the sealing ring SR is provided inside the hole” and “the second sentence seem[ing] to indicate that the sealing ring SR is provided as caulking on top of the hole.” *Id.* at 13.

An Examiner’s burden of proving unpatentability when rejecting claims in a patent application is by a preponderance of the evidence. *In re Caveney*, 761 F.2d 671, 674 (Fed. Cir. 1985). In order to satisfy this standard, the evidence must demonstrate that it is more likely than not that

the alleged facts are actually true. *See Bosies v. Benedict*, 27 F.3d 539, 542 (Fed. Cir. 1994) (noting that the preponderance of the evidence standard “only requires the fact finder ‘to believe that the existence of a fact is more probable than its nonexistence.’” (quoting *In re Winship*, 397 U.S. 358, 371 (1970)). For the reasons that follow, we determine that the Examiner has met that burden in this case.

The Examiner points to Trey’s explicit textual disclosure that “the extinguishing nozzle 5 [is] preferably sealed off relative to the enclosing rim 7, 7A by a sealing element SR formed, for example, as a prefinished sealing ring or gasket *inserted into the* respective hole[] O.” Trey 4:32–35 (emphasis added). That (i) Trey also discloses that “it is also possible to provide a subsequent seal with the aid of a plyable sealing material such as caulking” (*id.* at 4:35–37), (ii) Figure 4 suggests an SR with an outer diameter that is greater than that of the diameter of the insertion hole O, or (iii) Figures 3 and 4 appear to illustrate that hole O shares an outline with nozzle 5 does not negate this explicit disclosure of Trey in which the sealing ring is inserted into the hole. That is, the textual disclosure of Trey conveys that it is more probable than not that there is an embodiment in which a sealing ring or gasket is inserted into the insertion hole O to seal the nozzle relative to the enclosing rim. Accordingly, we agree with the Examiner that because “a sealing ring [or] gasket . . . is inserted into the hole between the nozzle and the installation section of Trey . . . , a gap is present between the nozzle and the installation section at least at the space occupied by the sealing ring SR.” Ans. 7.

We have also considered Appellant’s argument that “the provision of a sealing ring does not, in and of itself, indicate the presence of a gap

between parts.” Appeal Br. 24. For example, Appellant argues that “a sealing ring [might] merely amount[] to an additional insurance that contact between . . . contacting parts will be maintained in case of application of force” or “a sealing ring could be provided in a groove or recess spanning the circumference of the nozzle 5, with the non-recessed portions of the nozzle 5 being in contact with the base 10.” *Id.* at 24–25. As an initial matter, neither Trey’s written disclosure, nor drawings, gives any indication that there is a groove or recess spanning the circumference of the nozzle. Secondly, that a sealing ring could be used with *contacting* parts does not negate the explicit disclosure of a sealing ring or gasket *inserted* into the insertion hole of the nozzle. Thus, on the record before us, the Examiner’s findings that there is a gap between a nozzle and nozzle installation section in at least one embodiment is supported by a preponderance of the evidence.

For the foregoing reasons, we do not find that the Examiner erred in finding that Trey discloses all of the limitations of independent claim 21. We sustain the rejection of claim 21 under 35 U.S.C. § 102(a)(1) as anticipated by Trey.

DECISION

The Examiner’s decision to reject claims 1, 3–8, 17–20, and 22 under 35 U.S.C. § 102(a)(a) as anticipated by Trey is reversed.

The Examiner’s decision to rejection claim 21 under 35 U.S.C. § 102(a)(a) as anticipated by Trey is affirmed.

Appeal 2018-004391
Application 14/583,945

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