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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JUNYOUNG PARK
and JASON ROBERT PAROLINI

Appeal 2015-001352
Application 12/941,946
Technology Center 1700

Before KAREN M. HASTINGS, GEORGE C. BEST, and
N. WHITNEY WILSON, *Administrative Patent Judges*.

WILSON, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants¹ appeal under 35 U.S.C. § 134(a) from the Examiner's February 28, 2014 decision finally rejecting claims 1–4, 6–9, 16–19, and 21–23.² We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We affirm-in-part.

¹ Appellants identify the real party in interest as General Electric Company (Appeal Br. 2).

² Appellants further appeal the Examiner's rejection of claims 16–20 under new grounds (Ans. 8–9).

CLAIMED SUBJECT MATTER

Appellants' invention is directed to the repair of worn turbo machinery components using a wide gap brazing system or repair kit (Spec. ¶¶ 1, 2, 4, and 6). Claims 1 and 16 are representative and are reproduced below from the Claims Appendix of the Appeal Brief (*key claim limitations shown in italics*):

1. A system comprising:

a substrate;

a gap filling compound (GFC) comprising a brazing alloy having a plurality of particles, wherein the GFC is disposed inside a gap of the substrate; and

a GFC retention screen having a plurality of openings sized smaller than a size of the particles and disposed over the GFC and the substrate, the plurality of openings sized to substantially retain the GFC within the gap during brazing, and the GFC retention screen is configured to enable gas to escape from the GFC during brazing and to substantially block a flow of the GFC.

16. A repair kit comprising:

a gap filling compound (GFC) having a plurality of particles;

a screen having a plurality of openings sized smaller than the particles, wherein the screen is configured to be disposed on top of the GFC to substantially block a flow of the particles but to allow gas flow during brazing; and

steps for applying the kit, wherein the steps comprise:

disposing the GFC inside a gap included in a substrate;

disposing the screen on top of the GFC and of the substrate; and

brazing the gap.

Appeal Br. 12, 13 (Claims App.).

REJECTIONS

- I. Claims 1–4, 7–9, 16–19, 21, and 22 are rejected under 35 U.S.C. § 103(a) as unpatentable over Trucco.³
- II. Claims 6 and 23 are rejected under 35 U.S.C. § 103(a) as unpatentable over Trucco in view of Holi.⁴
- III. Claims 16–20 are rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.
- IV. Claims 16–20 are rejected under 35 U.S.C. § 112, ¶ 2 as indefinite.

DISCUSSION

Rejections under § 103(a)

Rejection I and II

As grounds for Rejection I, the Examiner finds Trucco teaches each of the features of independent claims 1, 16, and 21, except that it does not disclose a retention screen having a plurality of openings sized smaller than the size of solder particles in a GFC (Ans. 2, 5, 6). According to the Examiner, however, Trucco “teaches a ‘fine’ mesh” (*id.* at 3; *see also id.* at 9, citing Trucco ¶ 95) and “that the size of the mesh openings is a result effective variable that should be optimized depending [on the] particular application” (*Id.* at 3, 5, and 6, citing Trucco ¶ 140). The Examiner determines that it would have been obvious to the ordinary skilled artisan “to

³ Trucco, US 2004/0178251 A1, published Sept. 16, 2004.

⁴ Holi, WO 2009/051031 A1, published Apr. 23, 2009. Holi is in Japanese, and the Examiner relies on an English-language counterpart Holi, US 2010/0187290 A1, published July 29, 2010. Citations to Holi will reference the U.S. publication.

determine the optimum size (such as [a size] smaller than the particles) for the openings of [Trucco's] GFC retention screen . . . by routine experimentation as such is recognized as a result effecting variable of the system" (*id.* at 3; *see also id.* at 5, 6).

With the exception of claim 4, Appellants' arguments are directed to limitations recited in independent claim 1 (and independent claims 16 and 21) (*see generally* Appeal Br. 7–10; Reply Br. 3–5). Accordingly, our discussion will focus on claim 1 for these rejections.

Appellants argue that the Examiner erred by finding that the combination of Trucco (with or without Holi) describes or suggests modifying the size of retention screen openings to substantially retain GFC within the gap during brazing (Appeal Br. 7–9, 10; Reply Br. 3–4). Rather, Appellants contend that Trucco teaches using the screen as a wick to allow excess molten solder to freely flow through the mesh (Appeal Br. 8; Reply Br. 4).

On the other hand, the Examiner argues that:

[A]ny indication of particle size relative the screen opening is taken from this section of [Trucco] - the person of ordinary skill in the art at the time of the invention would appreciate that this disclosure of the prior art indicates that the particle size is larger than the screen openings as the powder does not enter the openings of the screen until it is molten.

((emphasis in original) Ans. 10). As explained by Appellants (*e.g.*, Appeal Br. 7–9, 10; Reply Br. 3–4), the Examiner's finding is not supported by a preponderance of the evidence.

A variable must be art-recognized as result-effective before it can be deemed to be subject to routine optimization. *In re Antonie*, 559 F.2d 618,

620 (CCPA 1977).⁵ On the record before us, we do not see where, or how, the prior art establishes that sizing of openings in a mesh used for wicking molten solder is a property which one skilled in the art would have recognized as a result-effective variable in the context of the claimed invention. The Examiner has not provided a finding in Trucco (or Holi) that teaches or suggests that “fine mesh” (Trucco ¶ 95) has openings smaller than the size of the solder particles.⁶ Accordingly, we cannot sustain the rejection of claim 1.

Appellants present separate arguments urging the reversal of the rejection of claim 4 (Appeal Br. 9–10; Reply Br. 4). For the reasons set forth above, the Examiner has not shown that mesh opening size is a response-effective variable. Accordingly, we also reverse the rejection of claim 4.

Accordingly, we reverse Rejection I of independent claims 1, 16, and 21 under 35 U.S.C. § 103(a), as well as this rejection of the claims which depend from them (i.e., claims 2–4, 7–9, 17–19, and 22). Likewise, we reverse Rejection II to claims 6 and 23 under 35 U.S.C. § 103(a).

⁵ The continuing viability of *Antonie*'s reasoning has been called questionable in view of the Supreme Court's decision in *KSR Int'l Inc. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007). *Ex parte Tatebe*, 2012 WL 253455 at *6 (BPAI January 23, 2012). We, however, remain bound by *Antonie* until it is overruled.

⁶ We are likewise not persuaded that the evidence supports the Examiner's finding the ordinary skilled artisan would glean from Trucco's teaching that a solder particle cannot enter mesh screen openings until the solder is molten. A convex surface or similar protrusion of a solder particle in non-molten form would partially enter the openings of a planar mesh.

Rejection III under § 101

The Examiner has rejected independent claim 16, which is drawn to “a repair kit” product, because it includes recitations using the word “steps” (Ans. 8). Therefore, according to the Examiner, claims 16 and dependent claims 17–19 claim both a product and a method, in contravention to 35 U.S.C. § 101 (*id.*).

On the other hand, Appellants argue that “one of ordinary skill in the art can understand[] such steps may be incorporated in a kit printed manual, a kit CD, a kit DVD, a recording, other instruction formats, and so forth” (Reply Br. 6). According to Appellants, the Examiner reversibly erred because claims 16–19, which are drawn to a “repair kit,” do not include recitations of a “method comprising” or a “method” (*see id.* 6–7).

We give the claim term “steps for” the broadest reasonable construction consistent with the specification. It is well established that:

“[T]he PTO must give claims their broadest reasonable construction consistent with the specification Therefore, we look to the specification to see if it provides a definition for claim terms, but otherwise apply a broad interpretation.”

In re ICON Health & Fitness, Inc., 496 F.3d 1374, 1379 (Fed. Cir. 2007).

“[A]s applicants may amend claims to narrow their scope, a broad construction during prosecution creates no unfairness to the applicant or patentee.” *Id.*

In this instance, the Specification is silent as to any instruction formats that may be incorporated in a kit (*see, e.g.*, Spec. ¶ 25 (“[T]he field repair technician may carry a repair kit that includes the GFC 74 as well as a mesh, perforated metal sheet, and/or ceramic filter”)); *see also id.* at ¶¶ 6, 40, 43). Appellants, furthermore, have not identified any disclosure in the

Specification which provides a definition for the recited limitation “steps for.” Although Appellants assert that discussions of the recited features of claim 16 can be found in the Specification (Appeal Br. 3–4, citing Spec. ¶¶ 37–42; Figure 7), the relied upon disclosure does not mention including instructions in the claimed repair kit. Rather, the cited passage and figure merely disclose active steps in a method for brazing a wide gap. Thus, we determine that the limitation “steps for,” as recited in claim 16, refers to method steps for applying the claimed kit. On the present record, we find a preponderance of the evidence supports the Examiner’s determination that claim 16 is impermissibly drawn to two different subject matter categories.

Accordingly, we affirm the Examiner’s § 101 rejection of claims 16–20 under Rejection III.

Rejection IV under § 112, ¶ 2 as indefinite

Section 112 ¶ 2, requires “that a patent’s claims, viewed in light of the specification . . . inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). The Examiner has rejected claims 16–20 under 35 U.S.C. § 112, ¶ 2 on the grounds that “[i]t is unclear whether these claims intend to claim a product or a method and[,] therefore[,] the scope of the claims is indefinite” (Ans. 9).

“[R]eciting both an apparatus and a method of using that apparatus renders a claim indefinite under section 112, paragraph 2.” *Rembrandt Data Technologies, LP, v. AOL*, 641 F.3d 1331, 1339 (Fed. Cir. 2011) (quoting *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005) (citing *Ex parte Lyell*, 17 U.S.P.Q.2d 1548 (B.P.A.I. 1990))). On the

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record before us, the preponderance of evidence weighs in favor of a conclusion that the claims fail to comply with the requirement to particularly point out and distinctly claim the subject matter.

Accordingly, we affirm the Examiner's § 112, ¶ 2 rejection of claims 16–20 under Rejection IV.

CONCLUSION

We REVERSE the rejection of claims 1–4, 7–9, 16–19, 21, and 22 under 35 U.S.C. § 103(a) over Trucco.

We REVERSE the rejection of claims 6 and 23 under 35 U.S.C. § 103(a) over Trucco in view of Holi.

We AFFIRM the rejection of claims 16–20 under 35 U.S.C. § 101.

We AFFIRM the rejection of claims 16–20 under 35 U.S.C. § 112, second paragraph, as indefinite.

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

AFFIRMED-IN-PART