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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ANDYLE GREGORY BAILEY and
STEVEN C. LANGFORD

Appeal 2014-005029
Application 11/754,529¹
Technology Center 3600

Before STEFAN STAICOVICI, JAMES P. CALVE, and
BRANDON J. WARNER, *Administrative Patent Judges*.

STAICOVICI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Andyle Gregory Bailey and Steven C. Langford (Appellants) appeal under 35 U.S.C. § 134(a) from the Examiner's final decision rejecting claims 1–14 and 24–29.² We have jurisdiction over this appeal under 35 U.S.C. § 6(b).

¹ According to Appellants, the real party in interest is VAM USA, LLC. Appeal Br. 3 (filed Oct. 12, 2012).

² Claims 15–23 are withdrawn. *Id.* at 5.

SUMMARY OF DECISION

We REVERSE.

INVENTION

Appellants' invention "relates to an oilfield threaded connection in which the thread load flank is at a slightly negative angle, and the torque shoulder is at a similar negative angle." Spec. 1, ll. 8–10.

Claims 1, 10, and 26–29 are independent. Claim 1 is illustrative of the claimed invention and reads as follows:

1. A threaded oilfield tubular connection, comprising:
 - a box connector having internal threads and a box torque shoulder not forming part of said internal threads;
 - a pin connector having external threads for mating engagement with the internal threads and a pin torque shoulder for engagement with the box torque shoulder when the connection is made up;
 - each of the external threads and the internal threads having a thread load flank which is at a negative angle with respect to a central axis of the connection; and
 - a stab flank;
 - and each of the box torque shoulder and the pin torque shoulder are at a negative angle with respect to a central axis of the connection.

REJECTIONS

The following rejections are before us for review:³

- I. The Examiner rejected claims 1–4, 8–14, 26, and 27 under 35 U.S.C. § 102(b) as anticipated by Tung (US 4,795,200, iss. Jan. 3, 1989).⁴
- II. The Examiner rejected claims 5–7, 24, and 25 under 35 U.S.C. § 103(a) as being unpatentable over Tung.⁵
- III. The Examiner rejected claims 28 and 29 under 35 U.S.C. § 103(a) as being unpatentable over Tung and Klementich (US 5,462,315).⁶

ANALYSIS

Rejection I

As to independent claims 1, 26, and 27, the Examiner finds that Tung’s “step up to the right of numeral (18)” on box 10 and pin 12, constitute the claimed “box torque shoulder” and “pin torque shoulder,”

³ The rejection under 35 U.S.C. § 112, second paragraph, of claims 1–9, 24, and 25, as being indefinite, is withdrawn. *See* Appeal Br. 6; Ans. 3.

⁴ Claims 1–4, 8, and 9 were made part of this rejection in a proper new ground of rejection presented by the Examiner in the Subsequent Examiner’s Answer, mailed Nov. 26, 2013 (“Ans.”). *See* Ans. 5. We agree with Appellants that the Examiner’s Answer (mailed Sept. 30, 2013) and Subsequent Answer are identical. *See* Subsequent Reply Brief 1 (filed Dec. 19, 2013).

⁵ This rejection is a proper new ground of rejection presented by the Examiner in the Subsequent Examiner’s Answer. *See* Ans. 5.

⁶ Claims 1–9, 24, and 25 were made part of Rejections I and II, respectively, in the Examiner’s new grounds of rejection in the Subsequent Examiner’s Answer. *See id.*

respectively. Ans. 6 (citing Tung, Fig. 1); *see also id.* at 11, 12. The Examiner further finds that “each of the box torque shoulder and the pin torque shoulder are at a negative angle with respect to a central axis of the connection.” Ans. 6 (citing Tung, Fig. 1).

In contrast, with respect to independent claim 10, the Examiner finds that Tung’s “drop off to the left of step area (18)” on box 12 and pin 10, constitute the claimed “box torque shoulder” and a “pin torque shoulder,” respectively. Ans. 8 (citing Tung, Fig. 1). The Examiner further finds that “each of the box torque shoulder and the pin torque shoulder are at an angle with respect to a central axis of the connection . . . with less than a 5° variance between the load flank and the torque shoulder on the respective pin connector or box connector. *Id.* at 9 (citing Tung, Fig. 1).

Thus, the Examiner appears to find that the claimed “box torque shoulder” and “pin torque shoulder” can be either the right side or the left side of step area 18 of Tung’s box 12 and pin 10, respectively.

Tung discloses, *inter alia*, a tubular connection including a box member 12, a pin member 10, and thread sets 14, 16 with intermediate step area 18 therebetween. Tung, col. 3, ll. 10–16, Fig. 1.

Although we appreciate that intermediate step area 18 includes a “step up” to the right of index number 18, and thus constitutes a “shoulder,”⁷ we do not agree with the Examiner that the “drop off” to the left of index number 18 likewise constitutes a “shoulder.” *See* Tung, Fig. 1. Rather, we

⁷ We agree with Appellants that an ordinary and customary meaning of the term “shoulder” is “the area of an item or object that serves as an abutment.” Reply Br. 12 (citing FreeOnlineDictionary).

agree with Appellants that what appears to the Examiner as a “drop off” to the left of index number 18 is actually an engaged thread of thread sets 14, 16. *See* Reply Br. 9 (filed Nov. 21, 2013). Although a drawing teaches all that it reasonably discloses and suggests to a person of ordinary skill in the art, it is not clear from Tung’s Figure 1, where the engaged thread of thread sets 14, 16 ends and the “drop off,” i.e., shoulder, begins. *See In re Aslanian*, 590 F.2d 911, 914 (CCPA 1979). We do not agree with the Examiner that the area to the left of index number 18 necessarily forms an abutment different from an engaged thread of thread sets 14, 16, as explicitly required by independent claim 1 (“box torque shoulder not forming part of said internal threads”). As such, the Examiner’s reliance on the area to the left of index number 18 in Tung’s Figure 1 as the claimed “box torque shoulder” and “pin torque shoulder” is based on speculation, and is thus deficient. Moreover, with respect to independent claims 26 and 27, we do not interpret the area to the left of index number 18 in Tung’s Figure 1 as both a “shoulder” and a thread, because doing so would mean that one feature disclosed in the prior art would correspond to two claim elements, and we construe separate claim terms as reciting separate structures. *See Engel Indus., Inc. v. Lockformer Co.*, 96 F.3d 1398, 1404–05 (Fed. Cir. 1996).

As to Tung’s “step up” located to the right of index number 18, although we appreciate that it constitutes a “shoulder,” i.e., an abutment between box 12 and pin 10, we do not agree with Examiner’s finding that it is necessarily at a “negative angle,” as called for by claims 1, 26, and 27. *See* Ans. 6, 11, and 12; *see also id.* at 27. Although Tung’s Figure 1 shows

clearly that thread sets 14, 16 are angled, the “step up” located to the right of index number 18, is not clearly shown as angled. Therefore, we agree with Appellants that a person of ordinary skill in the art, when viewing Tung’s Figure 1, could reasonably “*assume* that the angle[] . . . [of] the shoulder to the right of (18) . . . [is] at a 90° angle to the long axis of the connection.” Reply Br. 11 (emphasis added). In other words, it is not clear from Tung’s Figure 1 whether the “step up” located to the right of index number 18 forms a negative angle or a 90° angle to the long axis of the connection. As such, the Examiner’s finding is based on speculation, and is thus deficient. Moreover, because it is not clear from Tung’s Figure 1 whether Tung’s “step up” located to the right of index number 18 is angled, or by how much relative to angled thread sets 14, 16, Tung also fails to disclose a “less than a 5° variance between the load flank and the torque shoulder,” as called for by independent claim 10.

In conclusion, for the foregoing reasons, we do not sustain the rejection under 35 U.S.C. § 102(b) of independent claims 1, 10, 26, and 27, and their respective dependent claims 2–4, 8, 9, and 11–14, as anticipated by Tung.

Rejections II and III

The Examiner’s modification of Tung and use of Klementich’s disclosure does not remedy the deficiency of Tung as described *supra*. See Ans. 13–18. Hence, for the same reasons as discussed, we do not sustain the rejections under 35 U.S.C. § 103(a) of claims 5–7, 24, and 25 as being

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unpatentable over Tung and of claims 28 and 29 as being unpatentable over Tung and Klementich.

SUMMARY

The Examiner's decision to reject claims 1–14 and 24–29 is reversed.

REVERSED