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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GIANPIERO ANTONIO BUCCELLA

Appeal 2014-003517
Application 12/482,017¹
Technology Center 3700

Before JENNIFER D. BAHR, STEFAN STAICOVICI, and
ERIC C. JESCHKE, *Administrative Patent Judges*.

STAICOVICI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Gianpiero Antonio Buccella (Appellant) appeals under 35 U.S.C. § 134(a) from the Examiner's final decision rejecting under 35 U.S.C. § 103(a) claims 1, 3, and 6–8 as being unpatentable over Maruyama (US 6,201,207 B1, iss. Mar. 13, 2001), Legge (US 6,204,473 B1, iss. Mar. 20, 2001), and Thomas (US 4,855,565, iss. Aug. 8, 1989).² Appellant's

¹ According to Appellant, the real party in interest is Profile Cutting Systems Pty Ltd. Appeal Br. 1 (filed Aug. 2, 2013).

² Claims 2, 4, 5, 9, and 10 are canceled. Appellant's Amendment, filed Nov. 5, 2012, Claims Listing.

representative presented oral argument on November 15, 2016. We have jurisdiction over this appeal under 35 U.S.C. § 6(b).

SUMMARY OF DECISION

We REVERSE.

INVENTION

Appellant’s invention relates to a “cutting head for use with cutting machines especially plasma cutters.” Spec. 1, ll. 4–5.

Claim 1 is illustrative of the claimed invention and reads as follows:

1. A cutting head for a cutting machine, the cutting head having a holder arranged to support a cutting device, the holder being secured to an arm assembly that is adapted to be mounted to the cutting machine, the arm assembly comprising a rotatable arm that supports a parallelogram linkage coupled to the holder, the parallelogram linkage being driven by a link arm, a first servo motor to drive a screw located within a nut constrained in the arm assembly to translate rotational movement of the screw into linear movement of the link arm to effect tilt of the holder, and a second servo motor to rotate the arm of the arm assembly to effect rotational movement or swivel of the holder, the rotation of the screw and arm being effected by coaxial pulleys driven by the servo motors, whereby, in use, as the holder tilts and swivels to impart a bevel cut to a work piece the tip of the cutting device is maintained in the same position.

ANALYSIS

Independent claim 1 recites, *inter alia*, “an arm assembly comprising a rotatable arm that supports a parallelogram linkage coupled to the [cutting device] holder” and “a second servo motor to rotate the arm of the arm

assembly.” Appeal Br. 12 (Claims App.). As claim 8 is drawn to a “plasma cutting machine comprising . . . a cutting head according to claim 1,” claim 8 likewise requires the limitations noted above. *Id.* at 13.

The Examiner finds that Maruyama discloses “an arm assembly 25 supporting a parallelogram linkage” and “a servo motor 29 and 30 which drives spline 27 to move the arm 25 and the linkage assembly.” Final Act. 2 (transmitted Dec. 6, 2012).

Appellant argues that “[t]he Examiner has not identified a single element in Maruyama which comprises a link arm.” Appeal Br. 7. Appellant further contends that as “[e]lement 30 is a conducting member,” the Examiner “has not identified a second servomotor in Maruyama.” *Id.* at 8. According to Appellant, “Maruyama does not disclose any motor to rotate the rotatable arm.” *Id.* at 9.

In response, the Examiner explains that motors 24 and 29 of Maruyama constitute the claimed first and second servomotors and “swinging member 4 is considered the link arm as it controls the pivot angle of the parallelogram assembly.” Ans. 4 (transmitted Nov. 8, 2013). The Examiner further states that although “[i]t is unclear as to what applicant is referring to by the rotatable arm as it is not reference[d] in the [S]pecification,” “arms 35 . . . could be considered the rotatable arm.” *Id.*

Although we appreciate that the phrase “rotatable arm” does not appear in the Specification, claimed subject matter need not be described *in haec verba* in the Specification. In this case, we note that the phrase “rotatable arm” appears in original claim 2. *See* Spec. 8, ll. 12–14. We further note that Appellant’s Specification describes arm assembly 60 as

“compris[ing] a drive body 61” that “is axially rotated by the larger pulley 54” driven by servomotor 46 to “cause[] the torch holder 69 and torch to swivel.” Spec. 5, ll. 4–5 and 8–10, Spec. 6, ll. 8–9. Similar to the description in the Specification, independent claim 1 recites “an arm assembly [60] comprising a rotatable arm that supports a parallelogram linkage coupled to the [cutting device] holder” and “a second servo motor [46] to rotate the arm of the arm assembly [60] to effect rotational movement or swivel of the [cutting device] holder.” See Appeal Br. 12. Accordingly, after comparing Appellant’s Specification with claim 1, it is quite clear that the drive body 61 described in Appellant’s Specification constitutes the “rotatable arm” recited in claim 1.

With respect to the Examiner’s finding that “arms 35 . . . could be considered the rotatable arm” (*see* Ans. 4), we note that reference number “35” in Maruyama describes “bearings” for attaching supporting members 36 to arms 33a, 33b and does not describe a structure that can be reasonably interpreted as a “rotatable arm.” See Maruyama, col. 6, ll. 43–45, Fig. 1. Nonetheless, even assuming *arguendo* that the Examiner is referring to Maruyama’s supporting members 36 as the claimed “rotatable arm,” for the following reasons, we do not agree that such an interpretation is reasonable to a person of ordinary skill in the art.

First, whereas claim 1 requires “an arm assembly comprising a rotatable arm,” the Examiner does not explain how Maruyama’s arm 25, which the Examiner finds to be the recited “arm assembly” (*see* Final Act. 2), includes supporting members 36. See Maruyama, Fig. 1. Maruyama explains that supporting members 36 are attached to the ends of arms 33a,

33b that project from horizontal links 2a, 2b forming a parallelogram linkage. *See id.*, col. 4, ll. 37–44. Thus, secondly, although in claim 1 the “rotatable arm . . . supports a parallelogram linkage,” in Maruyama it is parallelogram linkage 2a, 2b, 33a, 33b that supports³ supporting members 36. To be exact, supporting members 36 support torch holder 34. *Id.*, col. 4, ll. 44–45. Finally, although the Examiner finds that motors 24 and 29 of Maruyama constitute the claimed first and second servomotors (*see* Ans. 4), the Examiner does not set forth an adequate explanation regarding how either of motors 24, 29 rotates supporting members 36. Rather, motor 24 pivotally rotates arm 25 and motor 29 swings motor 24 around a swinging axis 31. *See* Maruyama, col. 5, ll. 18–19 and 35–40.

In conclusion, for the foregoing reasons, we do not agree with the position that Maruyama’s supporting member 36 constitutes a “rotatable arm,” as called for by each of claims 1 and 8. The Examiner’s use of the disclosures of Legge and Thomas does not remedy the deficiencies of Maruyama discussed *supra*. *See* Final Act. 2–3. Therefore, we do not sustain the rejection under 35 U.S.C. § 103(a) of claims 1, 3, and 6–8 as unpatentable over Maruyama, Legge, and Thomas.

SUMMARY

The Examiner’s decision to reject claims 1, 3, and 6–8 is reversed.

REVERSED

³ An ordinary and customary meaning of the term “support” is “to hold up or serve as a foundation or prop for.” *Merriam Webster’s Collegiate Dictionary* (10th ed. 1997).