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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/205,216	09/05/2008	Daniel Allen Norton	4726-052	6408
24112	7590	12/13/2016	EXAMINER	
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			ART UNIT	PAPER NUMBER
			3726	
			MAIL DATE	DELIVERY MODE
			12/13/2016	PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DANIEL ALLEN NORTON and KENNETH L. POTTS

Appeal 2014-008300
Application 12/205,216¹
Technology Center 3700

Before STEFAN STAICOVICI, LEE L. STEPINA, and
AMANDA F. WIEKER, *Administrative Patent Judges*.

STAICOVICI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Daniel Allen Norton and Kenneth L. Potts (Appellants) appeal under 35 U.S.C. § 134(a) from the Examiner's final decision rejecting claims 1–8 and 12–18.² We have jurisdiction over this appeal under 35 U.S.C. § 6(b).

SUMMARY OF DECISION

We AFFIRM-IN-PART.

¹ According to Appellants, the real party in interest is ATI Industrial Automation, Inc. Appeal Br. 2 (filed Jan. 20, 2014).

² Claims 9–11 and 19 are withdrawn. *Id.*

INVENTION

Appellants' invention relates to a "manually actuated robotic tool changer utilizing displaced rolling members as a coupling mechanism."

Spec. 1 ¶ 1.

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

1. A manually actuated robotic tool changer, comprising:
 - a first unit adapted to be connected to one of a robotic arm or a robotic tool;
 - a second unit adapted to be connected to the other of the robotic arm or the robotic tool;
 - a plurality of rolling members retained in one of the units;
 - a piston mounted in one of the units, the piston moveable along its axis between unlocked and locked positions under manual actuation, the piston having a multi-faceted cam surface including an initial contact surface, a locking surface, and a failsafe surface interposed between the initial contact surface and the locking surface;
 - wherein, when the piston is in the locked position, the cam surface is operative to contact the rolling members in one of the units and to urge each rolling member against a surface of the other unit to couple the two units together.

REJECTIONS

The following rejections are before us for review:

- I. The Examiner rejected claims 1 and 3 under 35 U.S.C. § 102(b) as being anticipated by Erickson '631 (US 5,452,631, iss. Sept. 26, 1995).
- II. The Examiner rejected claims 1–6 and 12–16 under 35 U.S.C. § 103(a) as being unpatentable over Erickson '735 (US

4,747,735, iss. May 31, 1988) and Little (US 7,252,453 B1, iss. Aug. 7, 2007).³

- III. The Examiner rejected claims 7 and 17 under 35 U.S.C. § 103(a) as being unpatentable over Erickson '735, Little, and Tsutsumi (WO 2004/113031A1, pub. Dec. 29, 2004).⁴
- IV. The Examiner rejected claims 8 and 18 under 35 U.S.C. § 103(a) as being unpatentable over Erickson '735, Little, and Weskamp (US 4,906,123, iss. Mar. 6, 1990).

ANALYSIS

Rejection I

The Examiner finds that Erickson '631 discloses “a failsafe surface (not labeled, see figure 16) interposed between the initial contact surface (100) and the locking surface (116).” Final Act. 4 (mailed May 20, 2013).

Appellants argue that Erickson '631 fails to disclose a failsafe surface, as called for by claim 1. Appeal Br. 8. According to Appellants, “the term ‘failsafe surface’ must be construed according to its plain meaning,” which is “designed to return to a safe condition in the event of failure or malfunction.” *Id.* at 9 (citing to the online version of Collins English

³ Although claims 7 and 17 are mentioned in the heading of this rejection, as the Examiner does not include an analysis of these claims in the body of the rejection, and these claims are separately rejected in Rejection III, the inclusion of these claims is considered an inadvertent typographical error. *See* Final Act. 5–8 (mailed May 20, 2013).

⁴ US 2007/0231063 A1, pub. Oct. 4, 2007, is an English language counterpart of Tsutsumi. *See* Final Act. 8.

Dictionary – Complete & Unabridged 10th Edition, accessed on January 19, 2014 at <http://dictionary.reference.com/browse/failsafe>).

In response, the Examiner takes the position that because the limitation of “a failsafe surface interposed between the initial contact surface and the locking surface” lacks structural limitations, “[t]he limitation is merely descriptive and is open to interpretation deemed acceptable by the Examiner.” Ans. 10 (mailed May 29, 2014). Thus, according to the Examiner, “the claimed ‘failsafe’ surface is *any* intermediate surface interposed between the initial contact surface and the locking surface.” *Id.* (emphasis added).

It is well settled that claims are construed with an eye toward giving effect to all terms in the claim. *Bicon Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006). The Examiner’s interpretation of the phrase “a failsafe surface interposed between the initial contact surface and the locking surface” as “*any* intermediate surface interposed between the initial contact surface and the locking surface,” renders meaningless, or superfluous, the term “failsafe.” *Compare* Appeal Br. 15, *with* Ans. 10 (emphasis added). Like Appellants, we find that an ordinary and customary meaning of the term “failsafe” is “incorporating some feature for automatically counteracting the effect of an anticipated possible source of failure.” *Merriam Webster’s Collegiate Dictionary* (10th ed. 1997). Hence, as the surface disposed between initial contact surface 100 and locking surface 116 of Erickson '631 is not disclosed as incorporating a feature that can counter the effect of an anticipated source of failure, we agree with Appellants that

Erickson '631 fails to disclose a failsafe surface, as called for by claim 1.
See Reply Br. 4–5 (mailed July 29, 2014).

Accordingly, for the foregoing reasons, we do not sustain the rejection under 35 U.S.C. § 102(b) of claims 1 and 3 as being anticipated by Erickson '631.

Rejection II

The Examiner finds that Erickson '735 discloses most of the limitations of independent claims 1 and 12, but fails to disclose a “failsafe surface interposed between the initial contact surface and the locking surface.” Final Act. 5–6 (citing Erickson '735, col. 3, l. 55–col. 4, l. 29, col. 5, ll. 8–16, col. 7, l. 16–col. 8, l. 28, Figs. 1–4). Nonetheless, the Examiner finds that Little discloses a piston 32 of a robotic tool changer

having a multi-faceted cam surface (38) including an initial contact surface (38c), a locking surface (38e) and a failsafe surface (38d) interposed between the initial contact surface (38c) and the locking surface (38e), the failsafe surface (38d) operative to retard movement of the piston (32) in a second axial direction opposite the first direction.

Id. at 6 (citing Little, col. 3, ll. 29–67, col. 4, ll. 14–51, col. 5, ll. 27–48, Figs. 1–3D). The Examiner concludes that “[i]t would have been obvious to one of ordinary skill in the art at the time of invention to alternatively utilize the multi-faceted cam surface of Little with the tool changer of Erickson as an alternative component capable of effectively coupling or de-coupling the tool units.” *Id.* at 6–7.

Appellants argue that neither Erickson '735 nor Little discloses manual actuation of a tool changer or a piston. Appeal Br. 11. According to

Appellants, the piston of Erickson '735 “is actuated by conventional power-driven means” and “the piston in Little is pneumatically actuated.” *Id.* (citing Erickson '735, col. 5, ll. 16–20, and Little, col. 3, ll. 23–27, Fig. 1).

Appellants further argue that because Erickson '735 discloses ramp 95 and groove 97 oriented asymmetrically with respect to the axis of rod 38, whereas Little discloses ramps/surfaces 38a–e oriented symmetrically with respect to the axis of piston 32, a person of ordinary skill in the art “would not find it obvious to substitute Little’s piston into” the device of Erickson '735. *See* Appeal Br. 12–13 (citing Erickson '735, col. 8, ll. 19–28); *see also* Reply Br. 12–13. Rather, according to Appellants, “one of skill in the art would be discouraged from such an approach, as Erickson ['735] explicitly teaches that the combined ramp/groove design presents significant advantages over an equal-angle design, such as Little’s.” *Id.* at 13.

In response, the Examiner takes the position that the limitation “[a] manually actuated robotic tool changer” is an intended use limitation in the preamble of independent claims 1 and 12, and thus, the toolholder of Erickson '735 is capable of performing the recited manual actuation. *See* Final Act. 5, 9–10 (citing *In re Schreiber*, 128 F.3d 1473, 1478 (Fed. Cir. 1997)); *see also* Ans. 9.

Claims 1–6

Independent claim 1 is drawn to “[a] manually actuated robotic tool changer” including, *inter alia*, a “piston movable along its axis . . . under manual actuation.” Appeal Br. 15 (Claims App.).

When we look at the preamble of Appellants' claimed invention, we note that a preamble usually will not limit the scope of the claim unless the preamble provides antecedence for ensuing claim terms and limits the claim accordingly. This is what the jurisprudence means by giving life, meaning and vitality to the claims. *See Kropa v. Robie*, 187 F.2d 150, 152 (CCPA 1951). In this instance, there is nexus between the preamble, i.e., “[a] manually actuated robotic tool changer” and the claim limitation of a “piston movable along its axis . . . under manual actuation.” The preamble recitation of a “manually actuated” robotic changer limits the claimed piston to a manually actuated piston, and thus, serves to structurally distinguish the claimed piston over other pistons such as the power driven or spring actuated piston 38 of Erickson '735 and the pneumatically driven piston 32 of Little. We thus agree with Appellants that neither Erickson '735 nor Little discloses a manually actuated piston. *See Reply Br. 6.*

In conclusion, for the foregoing reasons, we do not sustain the rejection under 35 U.S.C. § 103(a) of claims 1–6 as unpatentable over Erickson '735 and Little.

Claims 12–16

In contrast to claim 1, in independent claim 12, the language at issue of “[a] piston for a manually actuated robotic tool changer” is directed towards the intended use of the piston because it appears only in the preamble of claim 12. If the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than

any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999). In this case, we find that the claimed use of Appellants' piston, namely, "for a manually actuated robotic tool changer," does not result in any structural difference to the claimed piston. In other words, there is no claimed structure that would limit the use of the claimed piston to a manually actuated robotic tool changer. In contrast to independent claim 1, which requires a robotic tool changer including a "piston movable along its axis . . . under manual actuation," claim 12 does not have such a requirement. Here, it is clear that the body of the claim is a self-contained description of the subject matter claimed, and the recitation that the piston is "for a manually actuated robotic tool changer" is merely the recitation of an intended use. Moreover, it is well settled that the recitation of an intended use for an old product does not make a claim to that old product patentable. *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997). We thus agree with the Examiner that the piston of Erickson '735 is reasonably capable of use in a manually actuated robotic tool changer, and Appellants have not shown persuasively that this is not the case. *See* Ans. 9.

We are also not persuaded by Appellants' argument that Erickson '735 teaches away from the claimed invention because the Examiner is not proposing to *substitute* Little's piston into the device of Erickson '735. *See* Appeal Br. 13; Reply Br. 6–8. Rather, the Examiner is providing the failsafe surface of Little to the piston of Erickson '735. *See* Ans. 12 ("The Examiner is merely providing a teaching of a failsafe surface disclosed by Little

capable of being incorporated with the invention of Erickson.”). Appellants do not point to any passage in Erickson '735 that “criticize[s], discredit[s] or otherwise discourage[s]” providing a failsafe surface to its piston 38. *See In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004). As such, the resulting piston of Erickson '735 would include the failsafe surface of Little in addition to ramp 95 and groove 97. Therefore, in contrast to Appellants’ position, the Examiner’s modification of the piston rod 38 of Erickson '735, to include the failsafe surface of Little, would retain the asymmetrical orientation of ramp 95 and groove 97, and hence, provide the purported advantages of such an asymmetrical orientation. *See Reply Br. 7.*

In conclusion, for the foregoing reasons, we sustain the rejection under 35 U.S.C. § 103(a) of claim 12 as unpatentable over Erickson '735 and Little.

Appellants do not present any other substantive arguments with respect to the rejection of dependent claims 13–16. *See Appeal Br. 13.* Therefore, we also sustain the rejection of claims 13–16 over the combined teachings of Erickson '735 and Little.

Rejection III

In regards to the rejection of claim 7, which depends indirectly from claim 1, the Examiner’s use of the disclosure of Tsutsumi does not remedy the deficiencies of the teachings of Erickson '735 and Little, as discussed *supra*. *See Final Act. 8.* Accordingly, for the same reasons as discussed above, we do not sustain the rejection of claim 7 as unpatentable over Erickson '735, Little, and Tsutsumi.

As to the rejection of claim 17, which depends indirectly from independent claim 12, Appellants do not present any other substantive arguments. *See* Appeal Br. 13. Therefore, for the same reasons as discussed *supra*, we also sustain the rejection under 35 U.S.C. § 103(a) of claim 17 as unpatentable over Erickson '735, Little, and Tsutsumi.

Rejection IV

In regards to the rejection of claim 8, which depends indirectly from claim 1, the Examiner's use of the disclosure of Weskamp does not remedy the deficiencies of the teachings of Erickson '735 and Little, as discussed *supra*. *See* Final Act. 8–9. Accordingly, for the same reasons as discussed above, we do not sustain the rejection of claim 8 as unpatentable over Erickson '735, Little, and Weskamp.

As to the rejection of claim 18, which depends indirectly from independent claim 12, Appellants do not present any other substantive arguments. *See* Appeal Br. 13. Therefore, for the same reasons as discussed *supra*, we also sustain the rejection under 35 U.S.C. § 103(a) of claim 18 as unpatentable over Erickson '735, Little, and Weskamp.

SUMMARY

The Examiner's decision to reject claims 1 and 3 under 35 U.S.C. § 102(b) as anticipated by Erickson '631 is reversed.

The Examiner's decision to reject claims 1–6 and 12–16 under 35 U.S.C. § 103(a) as unpatentable over Erickson '735 and Little is affirmed as to claims 12–16 and reversed as to claims 1–6.

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The Examiner's decision to reject claims 7 and 17 under 35 U.S.C. § 103(a) as unpatentable over Erickson '735, Little, and Tsutsumi is affirmed as to claim 17 and reversed as to claim 7.

The Examiner's decision to reject claims 8 and 18 under 35 U.S.C. § 103(a) as unpatentable over Erickson '735, Little, and Weskamp is affirmed as to claim 18 and reversed as to claim 8.

AFFIRMED-IN-PART