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RENNER OTTO BOISSELLE & SKLAR, LLP 1621 EUCLID AVENUE NINETEENTH FLOOR CLEVELAND, OH 44115			TOLAN, EDWARD THOMAS	
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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* MATTIAS ANDERSSON

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Appeal 2014-009913  
Application 12/680,000<sup>1</sup>  
Technology Center 3700

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Before JOHN C. KERINS, STEFAN STAICOVICI, and LEE L. STEPINA,  
*Administrative Patent Judges.*

STAICOVICI, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Mattias Andersson (Appellant) appeals under 35 U.S.C. § 134(a) from the Examiner's final decision rejecting claims 1–10.<sup>2</sup> We have jurisdiction over this appeal under 35 U.S.C. § 6(b).

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<sup>1</sup> According to Appellant, the real party in interest is Nord-Lock AB. Appeal Br. 2 (filed May 29, 2014).

<sup>2</sup> Claims 11–28 are withdrawn from consideration. Final Act. 1 (mailed Sept. 6, 2013).

## SUMMARY OF DECISION

We REVERSE.

### INVENTION

Appellant's invention relates to a method for manufacturing washers for locking. Spec. 1, ll. 6–7.

Claim 1, the sole independent claim, is representative of the claimed invention and reads as follows:

1. A method for the manufacturing of circular washers for locking from blanks, a washer having a central hole, a first side comprising a pattern of radially extending teeth and a second side comprising a pattern of radially extending cams, comprising the steps of
  - producing a washer blank having an annular shape;
  - introducing the washer blank into a die assembly for forming a closed shaping space by a lower die portion, an opposing upper die portion, a central die portion and a support piece providing a circumferential outer wall of said closed shaping space, the central die portion extending through a washer blank central hole;
  - forming the blank to a washer, in said closed shaping space, by mutual movement of said lower and upper die portions;
  - opening the closed shaping space to extract the formed washer.

### REJECTIONS

The following rejections are before us for review:

- I. The Examiner rejected claims 1, 2, 5, 6, and 8–10 under 35 U.S.C. § 103(a) as being unpatentable over Takeda (JP 05-329568, pub. Dec. 14, 1993) and Lin (US 7,331,874 B2, iss. Feb. 19, 2008).

II. The Examiner rejected claims 3 and 4 under 35 U.S.C. § 103(a) as being unpatentable over Takeda, Lin, and Lee (US 5,259,819, iss. Nov. 9, 1993).

III. The Examiner rejected claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Takeda, Lin, and Uehara (US 7,191,633 B1, iss. Mar. 20, 2007).

## ANALYSIS

### *Rejection I*

Claim 1 is directed to a method of manufacturing “a washer having a central hole, a first side comprising a pattern of radially extending teeth and a second side comprising a pattern of radially extending cams.” Appeal Br. 18 (Claims App.).

The Examiner finds that Takeda discloses most of the manufacturing steps of claim 1, but that the resulting washer does not have teeth and cams. Final Act. 2. The Examiner relies on Lin as disclosing “a die set (4, 5) operable to provide [a] known washer structure consisting of sloped surfaces, grooves (cams) and ridges (teeth) to a blank.” *Id.* (citing Lin, col. 2, ll. 54–63). The Examiner concludes that “[i]t would have been obvious to one skilled in the art at the time of invention to provide the dies of Takeda with washer structure features as taught by Lin in order to produce a circular washer having known locking features.” *Id.*

Appellant argues that because the cutting/punching forces in Takeda are much lower than the forces needed to form teeth and cams, as in Lin (*see* Appeal Br. 8–10), “one having ordinary skill in the art would not be motivated to provide the dies of Takeda with a washer structure as taught by

Lin, and even if one was motivated to do so, it would require a complete redesign of Takeda to accomplish.” *Id.* at 10.<sup>3</sup>

The Examiner responds that because “Lin is a teaching reference . . . show[ing] that it is known in the art to provide washer making dies with surfaces for producing lobes and ridges in washers,” it would not “take a complete redesign to provide a punch and/or die faces with [such] features.” Ans. 4. Moreover, according to the Examiner, Appellant’s argument is speculative because “[i]f the device has enough force to flatten a dented washer, there would be enough force to form features or it would be an obvious matter of design choice to provide enough force.” *Id.* at 4–5. In support of this position, the Examiner relies on CN 1453097, which was cited by Appellant in an IDS filed March 30, 2012. *Id.* at 5 (citing CN 1453097, Figs. 7 and 8).

Appellant replies that it is “mere speculation on the part of the Examiner that such changes are ‘a matter of design choice.’” Reply Br. 4. Appellant asserts that “[t]he Examiner has not provided any rational[e] for this speculation rather than to assert it so,” and “has not provided an articulated reasoning with some rational underpinning to support this conclusion, and therefore has failed to make a prima facie case for obviousness.” *Id.* Appellant argues that CN 1453097 does not support the Examiner’s position because based on the “structural differences noted at only the ‘business-end’ of the machine that is shown, it is inherently

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<sup>3</sup> In support of this argument, Appellant refers to a declaration under 37 C.F.R. § 1.132 prepared by Byron Palmer, which was submitted with the Notice of Appeal on Mar. 6, 2014. Although the record shows that the declaration has not been considered, we do not reach the declaration because we do not sustain the Examiner’s rejections, for reasons explained herein.

apparent that there are differences in each of the depicted machining operations to one of ordinary skill in the art.” *Id.* at 6.

First, we do not agree with the Examiner’s position that, because the device of Takeda has enough force to flatten a dented washer, there would be enough force to form the claimed surface features. “Inherency . . . may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (citations and internal quotation marks omitted). In this case, although we appreciate that flattening an indented washer would require some force, nonetheless, the Examiner has not provided any persuasive evidence or technical reasoning to show that the force required for flattening *necessarily* is sufficient to form the claimed surface features, namely, teeth and cams, on a washer.

Second, we also do not agree with the Examiner’s position that the force required for forming the claimed features is an obvious matter of design choice. *See* Ans. 5. A proposed change that results in different structure and function may not be an obvious design choice. *E.g., Fluor Tec, Corp. v. Kappos*, 499 Fed. Appx. 35, 41–42 (Fed. Cir. 2012) (adding an expander to a lower pressure configuration to accommodate a high pressure feed was not a design choice where a separate high-pressure configuration also was used). Here, Takeda discloses a two-step operation for forming a flat washer having a central hole 4. In a first punching operation, a first set of punching dies 1, 2 are used to form a part 5 and then, in a second operation, part 5 is turned upside down and placed between a second set of dies 8, 13 in a closed configuration to shave off peripheral edge portion 18 and to flatten the resulting washer 5. *See* Takeda, Abstract, para. 10, Figs.

4a, 4b. Lin likewise forms similar central holes 21, 27 using a stamping process. *See* Lin, col. 2, ll. 64–67 and col. 3, ll. 16–19; Figs. 3A, 3B, 4. However, Lin then discloses forming “structures such as wedge planes (i.e., sloped surfaces), V-shaped grooves, and ridges on the top and bottom surfaces” in a separate cold forging process using dies 4, 5, in an open die configuration. *Id.* at col. 2, ll. 57–60, col. 3, ll. 7–15. As such, modifying the level of force in Takeda’s process is not a mere design choice, as the Examiner contends, because forming the features of Lin requires a cold forging process using an open die configuration, which is structurally different from the closed die configuration used in Takeda’s shaving and flattening process. *Compare* Takeda, Fig. 4b with Lin, Fig. 4. The Examiner has failed to adequately explain how merely modifying the level of force in Takeda’s process would result in washer 5 having the surface features of Lin. We thus agree with Appellant that modifying the process of Takeda, to include a cold forging process using an open die configuration would change the structure and operation of Takeda and thus, does not constitute a mere design choice, as the Examiner contends. Reply Br. 2–4; Appeal Br. 9–10.

Lastly, we do not agree that CN 1453097 supports the Examiner’s position, because each of the Figures in CN 1453097 depicts a different processing step with each step using a differently shaped die and thus, each step having a different function. CN 1453097, Abstract; Figs. 4–8. As the structure of the dies shown in Figures 7 and 8 of CN 1453097 are different, it cannot be concluded that merely modifying the level of force applied in the forging process of Figure 7 will result in the surface features shown in Figure 8.

Accordingly, for the foregoing reasons, we do not sustain the rejection of claims 1, 2, 5, 6, and 8–10 under 35 U.S.C. § 103(a) as unpatentable over Takeda and Lin.

*Rejections II and III*

The Examiner's use of the disclosures of Lee or Uehara does not remedy the deficiencies of the rejection based on Takeda and Lin, discussed *supra*. See Final Act. 3–4.

Accordingly, for the same reasons as set forth above, the rejections under 35 U.S.C. § 103(a) of claims 3 and 4 based on the combined teachings of Takeda, Lin, and Lee, and of claim 7 based on the combined teachings of Takeda, Lin, and Uehara, are also not sustained.

SUMMARY

The Examiner's decision to reject claims 1–10 is reversed.

REVERSED