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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* KIYOHICO KAMATA, TOSHIHISA NISHIJYO,  
TOKU FUKAYA, and YOSHIHARU SETTSU

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Appeal 2017-004097  
Application 13/940,057<sup>1</sup>  
Technology Center 3600

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Before STEFAN STAICOVICI, LYNNE H. BROWNE, and  
ANNETTE R. REIMERS, *Administrative Patent Judges*.

STAICOVICI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Kiyohiko Kamata et al. (“Appellants”) appeal under 35 U.S.C. § 134(a) from the Examiner’s decision in the Final Office Action (dated Apr. 29, 2016, hereinafter “Final Act.”) rejecting claims 1, 2, and 5–9 under 35 U.S.C. § 103(a) as being unpatentable over Okada et al.<sup>2</sup> (CN 202108349 (U), published Jan. 11, 2012, hereinafter “Okada ’349”).<sup>3</sup>

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<sup>1</sup> Mitsui Kinzoku Act Corporation is the Applicant as provided in 37 C.F.R. § 1.46 and is identified as the real party in interest in Appellants’ Appeal Brief 1 (filed Sept. 28, 2016, hereinafter “Appeal Br.”).

<sup>2</sup> Appellants refer to this reference as the “’349 reference” and the Examiner refers to it as “’349.”

<sup>3</sup> Claims 3 and 4 are cancelled. Appeal Br. 13 (Claims App.).

Appellants' representative presented oral argument on November 6, 2018. We have jurisdiction over this appeal under 35 U.S.C. § 6(b).

## SUMMARY OF DECISION

We REVERSE.

## INVENTION

Appellants' invention is directed "to a check link apparatus which defines a full open position of a door of a vehicle." Spec. 1, ll. 10–11.

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

1. A check link apparatus comprising:
  - an arm comprising a metal core that comprises:
    - a plate-shaped arm core portion;
    - a connecting core portion that is provided at a first end of the arm core portion and is connected rotatably to either of a vehicle main body or a door; and
    - a plate shaped stopper core portion that is provided at a second end, which is opposite to the first end, of the arm core portion and expands in a direction intersecting a longitudinal direction of the arm core portion, wherein the stopper core portion is coplanar with the arm core portion, the stopper core portion has a substantially uniform thickness, and a stopper portion is formed by covering at least the stopper core portion with a resin material; and
    - a holding member that is mounted on the other of the vehicle main body and the door, through which the arm core portion is slidably inserted, wherein the holding member is configured to define a full open position of the door by being brought into abutment with the stopper portion,
    - wherein the stopper core portion has a curved surface on an end face that is configured to face an abutment surface of the holding member at least when the abutment surface of the

holding member is brought into abutment with the stopper portion, the end face continued from the arm core portion curves toward a plane orthogonal to a longitudinal axis of the arm at the stopper core portion so as to form at least a portion extending along the plane orthogonal to the longitudinal axis of the arm at the stopper core portion, and the portion of the end face extending along the plane orthogonal to the longitudinal axis of the arm is directly connected to the curved surface, and wherein a circular hole is formed substantially in a center of the stopper core portion, the circular hole penetrates through the stopper core portion in a thickness direction thereof, the circular hole is included in a widthwise dimension of the arm core portion extended in a longitudinal direction of the arm core portion, the circular hole is formed in a position which lies between a distal end of the stopper core portion and an intersection of the arm core portion and a widthwise widened portion of the stopper core portion, and the circular hole extends to a proximity of the plane orthogonal to the longitudinal axis of the arm along which the end face of the stopper core portion extends.

#### ANALYSIS

The Examiner finds that Okada '349 discloses most of the limitations of independent claim 1, including *inter alia*, “a reinforcing ridge (21g) surrounding a circular hole (21f)” and “another circular hole (21e) without a reinforcing ridge, the surface of that portion of the core ha[ving] a substantially uniform thickness.” Final Act. 3–4; *see also* Okada '349, Fig. 9. However, the Examiner finds that Okada '349 “does not disclose wherein the stopper core portion has a substantially uniform thickness.” *Id.* at 4. Nonetheless, the Examiner concludes that:

It would have been obvious to one having ordinary skill in the art at the time the invention was made to reverse which circular hole [in Okada '349] had a reinforcing ridge such that the circular hole 21f has no reinforcing ridge rendering the stopper

core portion a substantially uniform thickness, since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art.

*Id.* at 4–5 (citing MPEP § 2144.04). The Examiner explains that “[t]he removal of the ridges 21g renders [the] identical structure to that claimed,” and, thus, “[t]he structure of ’349 as modified by the removal of the ridges 21g would be equally capable of preventing the resin from separating from the core as the structure of the claimed invention.” *Id.* at 10 (citing MPEP § 2144.04(II)(A)) (“Omission of an element and its function is obvious if the function of the element is not desired’.”).<sup>4</sup> As such, according to the Examiner, because the function of ridges 21g of Okada ’349 “increases the difficulty of peeling the resin layer from the core portion,” which “may only be necessary under [application of] larger forces,” the skilled artisan that wants to use the check link of Okada ’349 “in a low force application would not need the ridges 21g, and it would therefore be obvious to eliminate the ridges 21g to reduce material costs.” *Id.*

In response, Appellants argue that because “ridges 21g are disclosed by the ’349 reference to increase the difficulty of peeling the cladding layer 22 off of the core stopper 21c,” a person of ordinary skill in the art “would have no reason to remove the ridges 21g and the disclosed function of the ridges, from the apparatus disclosed by the ’349 reference.” Appeal Br. 9. According to Appellants:

[T]he Examiner’s assertion that low force applications exist for the arm 20 which would not require the ridges 21g is not supported by the disclosure of the ’349 reference, and there is

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<sup>4</sup> MPEP § 2144.04(II)(A) cites *In re Larson*, 340 F.2d 965 (CCPA 1965) and *In re Kuhle*, 526 F.2d 553 (CCPA 1975).

no evidence that a “low force application” exists for a check link apparatus of the type disclosed in the cited reference.

*Id.*

The Examiner responds that because “ridges are not the only part preventing peeling” as “friction, adhesion, etc.” and “the insertion of the resin through the hole” prevent peeling as well, “the peeling resistance of Appellant[s]’ claimed invention would be *equal* to the peeling resistance of the prior art with the ridges removed or relocated to a different hole.” Examiner’s Answer 4 (dated Nov. 16, 2016, hereinafter “Ans.”) (emphasis added). According to the Examiner, “[t]he ridges only INCREASE the peeling resistance,” and, thus, a skilled artisan “wanting to utilize the hinge in a lower force application . . . would remove or relocate the ridges if the increased peeling resistance were not *desired*.” *Id.* at 4–5 (emphasis added). Hence, the Examiner concludes that because Appellants do not disclose or claim any structure which performs the function of increasing peeling strength without the presence of ridges, “the removal of the ridges 21g would be equally capable of preventing the resin from separating from the core as the structure of the claimed invention.” *Id.* at 3–4.

Okada ’349 discloses a check link device 20 having metal core 21 covered by synthetic resin cladding 22, wherein core 21 includes, *inter alia*, core portion 21a, connecting portion 21b that connects the device to a vehicle body B using bracket BK and pin P, stopper portion 21c that comes into contact with holding member 10, and resin holes 21d. *See* Okada ’349, Abstract, Figs. 1, 9, 11. As Appellants note, during operation, curved surface Fc of stopper portion 21c comes into contact with holding member 10, but “due to the formation of the reinforcing ridges 21g surrounding [hole] 21f [of stopper portion 21c], the metal core can withstand the pressing

force and the cladding layer resists peeling.” Reply Brief 5 (filed Jan. 10, 2017, hereinafter “Reply Br.”) (citing Okada ’349, para. 72).<sup>5</sup> As such, in Okada ’349, reinforcing ridges 21g provide an adequate peeling resistance of resin cladding 22.

Rejections based on obviousness must be supported by “some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (citation omitted) (quoted in *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007)). Here, the Examiner has not provided an “articulated reasoning with some rational underpinning” to support modifying Okada ’349 to *negate* the benefit of adequate peeling resistance and, moreover, has also not provided persuasive evidence that such a benefit is not desired. Rather, a skilled artisan would readily understand that because stopper portion 21c absorbs impact forces when coming into contact with holding member 10, reinforcing ridges 21g surrounding hole 21f provide adequate peeling resistance of resin cladding 22 by absorbing and redistributing the impact force. *See In re Jacoby*, 309 F.2d 513, 516 (CCPA 1962); *see also* Reply Br. 5.

Hence, as reinforcing ridges 21g, when surrounding hole 21f, have a specific purpose in providing adequate peeling strength of resin cladding 22, we do not agree with the Examiner’s position that relocating ridges 21g from hole 21f to hole 21e constitutes a “mere reversal of . . . parts” that is “*equally* capable of preventing the resin from separating from the core.” *See* Final Act. 4–5, 10 (emphasis added). The Examiner has not provided sufficient

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<sup>5</sup> We note that the electronic record does not include an English language translation of Okada ’349.

evidence or technical reasoning to show by a preponderance of the evidence that relocating ridges 21g from hole 21f to hole 21e would provide adequate peeling strength of resin cladding 22 such that it would *equally* prevent it from separating from the core.<sup>6</sup> In other words, the Examiner's position does not adequately explain how locating ridges 21g around hole 21e would allow the absorption of impact forces when holding member 10 comes into contact with stopper portion 21c in an equal manner as when ridges 21g surround hole 21f such that adequate peeling resistance of resin cladding 22 is provided.

We further do not agree with the Examiner's assessment that reinforcing ridges 21g "INCREASE the peeling resistance" of resin cladding 22. Ans. 4. Although adhesion and friction constitute factors that affect peeling strength of resin cladding 22, the Examiner's position that such factors, in the absence of ridges 21g, can generate an adequate peeling strength is based on speculation. *See id.* Even though we appreciate the Examiner's position that "in lower force applications (such as small car doors)" the skilled artisan would require "a check link apparatus with a decreased peeling resistance" (*see id.* at 7), such a position also requires speculation on the Examiner's part. The Examiner does not articulate sufficient facts or technical reasoning to conclude that when modifying the check link device of Okada '349 to relocate ridge 21g from hole 21f to hole 21e that an adequate peeling strength results, even for small doors. Thus, for the foregoing reasons, the Examiner fails to adequately evidence through

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<sup>6</sup> According to the Examiner, "it would be obvious to reverse which of holes 21f and 21e [of Okada '349] had a reinforcing ridge such that the circular hole 21f has no reinforcing ridge [21g]." Ans. 2.

factual support or technical reasoning whether cladding layer 22 of the device of Okada '349, as modified by relocating ridges 21g from hole 21f to hole 21e, adequately resists peeling when stopper portion 21c comes into contact with holding member 10.

Lastly, we do not agree with the Examiner's position that *Larson* and *Kuhle*, cited in MPEP § 2144.04(II)(A), support the rejection here. *See* Final Act. 10; Ans. 4. In *Larson*, after eliminating an *additional* structure not required by the claimed invention, but that provided an *additional* feature, the resulting device still provided certain benefits, just not the specific *additional* benefit associated with the *additional* structure. *Larson*, 340 F.2d at 969. In contrast, here, ridge 21g does not constitute an additional structure, and removing ridge 21g from hole 21f would undermine the purpose of providing adequate peeling strength. *See* Reply Br. 5. Similarly, in *Kuhle*, the omission of a switch element did not affect the function of the claimed device for measuring soil moisture content, as it was not needed to complete the electrical circuit; whereas, in this case, the omission of ridge 21g has an effect on the resulting peeling strength.

In conclusion, as speculation cannot form the basis for concluding obviousness, we do not sustain the rejection of independent claim 1, and dependent claims 2 and 5–9, under 35 U.S.C. § 103(a) as unpatentable over Okada '349.

#### DECISION

The Examiner's decision to reject claims 1, 2, and 5–9 under 35 U.S.C. § 103(a) as unpatentable over Okada is reversed.

REVERSED