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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PERFORMANCE SOLUTIONS, LLC
Patent Owner and Appellant

Appeal 2023-003470
Reexamination Control 90/014,621[1]
Patent US 9,539,167 B2[2,3]
Technology Center 3900

Before JEFFREY B. ROBERTSON, DANIEL S. SONG, and JEREMY M. PLENZLER, *Administrative Patent Judges.*

SONG, *Administrative Patent Judge.*

DECISION ON APPEAL

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[1] This reexamination is related to the following reexamination proceedings that are also on appeal before the Board: 90/014,620 of US 9,656,112 B2 (Appeal 2023-003471); 90/014,614 of US 10,695,260 B2 (Appeal 2023-003493); and 90/014,616 of US 10,278,890 B2 (Appeal 2023-003494). Appeal Br. 1.

[2] Hereinafter "the '167 Patent" (Issued Jan. 10, 2017 to Dye).

[3] We are informed that the '167 Patent is the subject of litigation in two different district courts, which have been stayed pending resolution of this and the related reexamination proceedings. Appeal Br. 1. We are further informed that the '167 Patent was previously the subject of litigation in two other district courts, which have been settled and dismissed. Appeal Br. 1.

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. §§ 134(a) and 306, the Patent Owner (Appellant)[4] appeals from the Examiner's decision to reject claims 1–31. *See generally*, Final Act.; Appeal Br. 2. An oral hearing with the Appellant's representatives was conducted on October 31, 2023. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

CLAIMED SUBJECT MATTER

The claims are directed to a therapeutic, fitness, and sports enhancement device. Claim 1, reproduced below, illustrates the claimed subject matter:

> 1. A two piece therapeutic, fitness, and sports enhancement device consisting of:
>
> a first piece including an entirely cylindrically shaped core made of closed cell foam, plastic, or rubber material and having a diameter of about 3 inches to about 15 inches; and
>
> a second piece including an overlay about the cylindrically shaped core, [.] the overlay made of closed cell foam, plastic, or rubber material, including a plurality of shaped projections extending from the overlay, each of the plurality of shaped projections configured to extend into soft tissue of a user to enhance mobilization of soft tissue [and optimize body core strength[5]] and optimize body core strength and balance training.

Appeal Br. 207 (Claims App.).

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[4] The Appellant identifies the real party in interest as Performance Solutions, LLC. Appeal Br. 1.

[5] The Examiner informs us that this first instance of "and optimize body core strength" is a typographical error and is not part of claim 1. Ans. 23.

REFERENCES

The Examiner relies on the following references to reject the claims:

Name	Reference	Date
Sawtelle	US 1,519,631	Dec. 16, 1924
Bajette	US 1,958,936	May 15, 1934
Iyomasa	US 4,109,649	Aug. 29, 1978
Wisnieski	US 4,191,178	Mar. 4, 1980
Doherty	US 6,764,456 B1	July 20, 2004
Quick	US 7,108,646 B1	Sept. 19, 2006
Wang	DE 20119764 U1 (citations to the English translation of record)	Mar. 28, 2002

REJECTIONS

The Examiner maintains the following rejections:

Rejection	Claim(s) Rejected	35 U.S.C. §	Reference(s)/ Basis
I	1–22, 24–29	103(a)	Wang, Quick, Iyomasa
II	1–31	103(a)	Wang, Quick, Wisnieski
III	1–22, 24	103(a)	Quick, Doherty
IV	1–22, 24	103(a)	Quick, Bajette
V	1–4, 6–11, 21, 22, 24	103(a)	Quick, Sawtelle
VI	23	103(a)	Quick, Doherty, Wisnieski

OPINION

Claim Interpretation

Before addressing the substantive prior art rejections, we briefly address the claim interpretation arguments that the Appellant sets forth relative to the limitation "configured to extend into soft tissue," which is recited in each of the independent claims.

The Appellant argues that "the rejections are based on an incorrect legal definition of the claim term 'configured to' – a term of art recited in

each independent claim." Appeal Br. 12 (emphasis omitted). According to the Appellant, the proper construction of "configured to" is "Made or Designed To Perform the Claimed Functions Using a Plurality of Solid Projections," noting that this is the definition used by the Board and the Federal Circuit. Appeal Br. 36–38 (citing *Acclarent, Inc. v. Albritton*, 2018 WL 3374755, at *6 (PTAB, 2018); *In re Man Machine Interface Technologies LLC*, 822 F.3d 1282, 1286 (Fed. Cir. 2016); *In re Giannelli*, 739 F.3d 1375, 1379 (Fed. Cir. 2014)). The Appellant argues that the Examiner "has never provided a definition, but has evaluated the prior art based on a 'capability' standard." Appeal Br. 37. The Examiner does not dispute the Appellant's construction or set forth an alternative construction of the term "configured to," and instead, responds that "[t]he Examiner has provided an explanation of the prior art and cited to structure and description in the reference that explains how the structure meets the configured to term." Ans. 24. Thus, we do not disturb the uncontested construction of the term "configured to," which is consistent with the cited Federal Circuit precedent, and evaluate the Examiner's findings with respect to the pertinent prior art.

Although the Examiner does not set forth an alternative construction of the claims, the Examiner does point out that "the '167 patent does not provide criticality for the projections being configure[d] to extend into the soft tissue to the material selection. Throughout the '167 patent, it is the shape of the projections that are configured to extend into the soft tissue." Ans. 26 (citing Spec. col. 5, ll. 8–30). As the Examiner notes, the Specification does disclose various shapes for the claimed projections that extend into soft tissue of a user. *See* Spec. col. 5, ll. 1–6, 8–30. However,

we do not agree that shape is the only factor that is determinative of whether a projection is configured to extend into soft tissue. In that regard, the fact that the shape of the projection cannot be the only factor in determining whether a projection is configured to extend into soft tissue is readily apparent from the art of record.[6] As the Appellant points out "the specification says in several places that the combination of size, density, and shape of the projections [is] responsible for the[] useful properties." Reply Br. 25. For example, the Specification discloses that:

> In addition to the shape of the plurality of shaped projections **14**, the density of the pliable material for body **12** and the plurality of shaped projections **14** may be chosen to maximize soft tissue mobilization, improve body core and strength training, enhance flexibility, and/or optimize soft tissue distensibility. In one example, the density of the pliable material, e.g., a closed-cell polyethylene foam such as MINICEL® L200, L300 or L380, is in the range about 2.0 to 3.8 lb/ft^3.

Spec. col. 6, ll. 32–40. Furthermore, the Specification discloses that the projections extend radially about 3/8" to about 1" from the body. *See* Spec. col. 6, ll. 26–30. Thus, the Specification makes it reasonably clear that in order for a projection to be "configured to" extend into soft tissue as claimed, it must be made taking into consideration the material, density, and size, in addition to its shape.[7] *See also* Reply Br. 3 ("The Examiner has

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[6] *E.g.*, *compare* Wang Fig. 2 *with* Spec. Figs. 9A and 9B (Wang disclosing protrusions that have a shape similar to that disclosed in Figures 9A and 9B of the Specification, but Wang's projections are compressed flat when a child lies on top of the roller).

[7] We further note that based on the Appellant's arguments directed to the arrangement of the protrusions in Iyomasa (i.e., that its protrusions are too close together to allow for extension into soft tissue), and the responses of

never considered that the absence of any characteristics or properties disclosed in the cited prior art of the projections (such as their density, heights, and shapes) means that those projections are not designed or made to extend into soft tissue."); *see also* Reply Br. 3 ("The Examiner has never considered that the absence of any characteristics or properties disclosed in the cited prior art of the projections (such as their density, heights, and shapes) means that those projections are not designed or made to extend into soft tissue.").

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the Appellant's legal representative during the Oral Hearing, it is apparent that the projections must also be adequately spaced apart to allow for generation of adequate pressure, and adequate space for the displaced tissue, in order for the projections to extend into soft tissue. *See* Appeal Br. 81 (quoting Second Supp. Decl. Wilson ¶ 20 ("the interconnected nature of the projections in Iyomasa leaves little space between the projections. This spreads out the applied pressure between all the projections in contact with the foot, decreasing the amount of pressure applied by any particular projection and preventing each projection from extending into soft tissue to enhance mobilization of any soft tissue.")); Hearing Transcript, p. 16, l. 25–p. 17, l. 10 (the Appellant's counsel, in response to Judge Song's inquiry regarding adequate spacing also being required, stating "I can see your point that if you make it almost like a uniform area, then perhaps that could be an issue where no single projection is extending in. I would say when you look at the figures [of the reexamined patents], you know, those figures specifically show some amount of spacing in between the projections. So, the goal in presenting these examples of the figures of the rollers was to show that, yes, there is spacing. . . . [I]f you're looking for actual instructions, I would say, you know, we did provide figures."); Hearing Transcript, p. 17, ll. 13–16 ("JUDGE SONG: So although your specification doesn't discuss spacing, you're saying that the drawings indicate that there has to be spacing? MR. PURI: That there should be some spacing in between those projections, yes.").

The Appellant further sets forth the interpretation of "extend into soft tissue," stating that "[e]xtension into soft tissue refers to an external object entering space where soft tissue was located prior to entry of the object (e.g., projections)." Appeal Br. 77 (emphasis omitted) (quoting First Supp. Decl. Abbott ¶ 16). The Examiner again does not dispute the Appellant's interpretation or set forth a different interpretation. Thus, we again, do not disturb the Appellant's interpretation.

Therefore, we view the issues in this appeal as being the Examiner's factual findings relative to the applied prior art, and the conclusions of obviousness derived therefrom, as addressed *infra*.

Rejection I

The Examiner rejects claims 1–22 and 24–29 as being obvious over the combination of Wang, Quick, and Iyomasa. Final Act. 4. The Examiner finds that Wang discloses the device substantially claimed, "including a plurality of shaped projections (14) extending from the overlay, each of the plurality of shaped projections configured to extend into soft tissue of a user (Fig. 2; paragraph 0020 'for massage purposes') to enhance mobilization of soft tissue and optimize body core strength and balance training." Final Act. 4. The Examiner concedes that Wang "does not disclose the dimensions of the massage device." Final Act. 4. The Examiner finds that Quick discloses a similar device having a diameter of about 3 to 15 inches, and concludes that "it would have been obvious to one of ordinary skill in the art to make the massage device (11, 12) of Wang with a diameter in the range of 3-15 inches as taught by Quick." Final Act. 4–5 (citing Quick, col. 2, ll. 64–65).

The Examiner also finds that

> Iyomasa discloses a massager with a plurality of projections which are configured to "repeatedly and alternately stretch and compress the skin, muscles and tendons" to "achieve effective and efficient massaging". While Iyomasa is disclosed as being for a foot of a user, *the teaching of using projections to extend into the soft tissue* for the effective and efficient massaging is a teaching that the projections of Wang are capable of being configured to extend into the soft tissue of a user to enhance mobilization of soft tissue and optimize body core strength and balance training.

Final Act. 5 (emphasis added); *see also* Iyomasa, col. 1, ll. 53–60. In other words, the Examiner finds that the projections of Iyomasa "extend into the soft tissue" as claimed because they massage and compress muscles and tendons. Based thereon, the Examiner finds that the protrusions of Wang are also "capable of being [so] configured," and concludes that "it would have been obvious to one o[f] ordinary skill in the art to make the projections of Wang configured to extend into the soft tissue of a user to enhance mobilization of soft tissue and optimize body core strength and balance training as taught by Iyomasa." Final Act. 5.

We find this rejection to be deficient. First, we observe that the rejection appears to be inconsistent in finding that Wang discloses projections that are configured to extend into soft tissue of a user, but then relying on Iyomasa to conclude that it would have been obvious "to make the projections of Wang configured to extend into the soft tissue of a user." Final Act. 4–5. The rejection as articulated, is inconsistent or at least unclear as to whether the Examiner is finding (and relying on) Wang's projections are configured to extend into soft tissue or not such that its projections must be modified.

Regardless of this inconsistency, any finding that Wang discloses projections that are configured to extend into soft tissue of a user is not supported by the evidence of record. As noted above, the rejection relies on paragraph 20 and Figure 2 of Wang in support of this finding. However, paragraph 20 of Wang simply discloses "a plurality of protrusions 14 for massage purposes (cf. Figure 2)." Wang ¶ 20, Fig. 2. Accordingly, this finding is premised on equating massage in Wang with "extend into the soft tissue of a user" as claimed.

However, the evidence of record is insufficient to support this finding. As the Appellant points out, Wang does not contain explicit teaching that its protrusions extend into soft tissue. Appeal Br. 63. Instead, the same paragraph of Wang relied upon in the rejection discloses that the outer sleeve 12 with its protrusions "is made of a resilient and/or foam-like material to massage a user *comfortably in use*." Wang ¶ 20 (emphasis added). In addition, Figure 2 of Wang, also relied upon in the rejection, illustrates the protrusions in a compressed flat state when a child lies on top of the roller. Wang Fig. 2; *see also* Appeal Br. 67–68. These disclosures of Wang appear to indicate that its protrusions, while configured to "massage" as explicitly disclosed, are not "configured to extend into soft tissue of a user" as the Examiner finds. The evidence submitted by the Appellant affirms this understanding of Wang. *See* Decl. Graston ¶ 36 ("I am led to the conclusion that [Wang's] device is incapable of treating any fascia, muscle, tendon or ligament but rather is providing a sensory stimulation to the skin."); First Supp. Decl. Abbott ¶ 48 ("[Wang] is yet another device focused on providing stimulation of skin and fat for relaxation, rather than a device intended to extend into and mobilize soft tissue.").

To the extent that the rejection relies on modification to the protrusions of Wang based on the disclosure of Iyomasa, the Examiner has not sufficiently established by a preponderance of the evidence that the protrusions of Wang would extend into soft tissue, when modified in view of Iyomasa. In particular, the Examiner explains that "Iyomasa discloses compressing the muscles and tendons using the projections. Wang and Iyomasa both disclose massage devices with a plurality of projections for massage. Iyomasa discloses that the projections compress the muscles and tendons, which are soft tissue." Ans. 28 (citing Iyomasa col. 1, ll. 56–57). The Examiner further explains that "one of ordinary skill would have been motivated to have the projections of Wang be configure[d] to *compress the muscles and tendons and therefore extend into soft tissue*." Ans. 28 (emphasis added). Accordingly, the rejection relies on Iyomasa's disclosure of its projections compressing muscles and tendons to support the finding that its projections extend into soft tissue, and to support any modification to the protrusions of Wang.

However, we are persuaded by the Appellant's arguments and the submitted evidence that "[c]ompression is not synonymous with extension into soft tissue and it is not necessarily associated with any extension into soft tissue," and as such, Iyomasa also fails to disclose projections that are configured to extend into soft tissue. Appeal Br. 78 (quoting First Supp. Decl. Abbott ¶ 21); *see also* Reply Br. 5 ("the Examiner presented no evidence to support her conclusion that terms like 'stretching,' 'compression,' etc. are synonymous with extending into soft tissue. In contrast, Appellant presented multiple expert affidavits explaining why these terms are not synonymous with extending into soft tissue."). In that regard,

we find especially persuasive the submitted product literature evidence pertaining to the Requester's Gator Roller, which specifically depicts compression of soft tissue by projections of a roller, but wherein these projections do not extend into the soft tissue. *See* First Supp. Decl. Abbott ¶¶ 59–60; *see also* Appeal Br. 55–58. This evidence establishes that compression of soft tissue does not mean extension into soft tissue. Thus, contrary to the Examiner's finding, the Examiner has not sufficiently established that even the projections of Iyomasa extend into soft tissue of a user by its mere disclosure of compression of soft tissue.

In addition to the above arguments, the Appellant also argues that the rejection is deficient because, in contrast to the Examiner's finding, Wang fails to disclose an overlay made of closed cell foam, plastic, or rubber material as required by the independent claims. Appeal Br. 68–69. As the Appellant correctly points out, the outer layer of Wang is disclosed as being "made of a resilient and/or foam-like material." Wang ¶ 20. We are persuaded that "[a] teaching of 'foam-like material' is not a teaching of closed-cell foam." Appeal Br. 69; *see also id.* ("Closed-cell foam has higher resistance to compression suitable for extending into soft tissue of a user – a distinction specifically noted by the Examiner in the original prosecution in allowing the claims over the prior art."). Although a closed-cell foam is clearly a species in a broader category of foam-like materials, as the Appellant points out, the rejection fails to address this deficiency in the Examiner's finding with respect to the rejected independent claims, each of which requires the overlay to be "made of closed cell foam, plastic, or rubber material." Reply Br. 26.

The Examiner's application of Quick does not remedy the above noted deficiencies. The Examiner has not articulated a reason with rational underpinnings as to why it would have been obvious to a person of ordinary skill in the art to further modify the protrusions of Wang in view of Quick and Iyomasa to extend into soft tissue. The Examiner has also not articulated a reason with rational underpinnings as to why it would have been obvious to a person of ordinary skill in the art to further modify the protrusions of Wang in view of Quick and Iyomasa to provide an outer sleeve made from one of the materials claimed.

Therefore, in view of the above, we reverse the Examiner's rejection of claims 1–22 and 24–29 as obvious over the combination of Wang, Quick, and Iyomasa. The remaining arguments of the Appellant are moot.

Rejection II

The Examiner rejects claims 1–31 as being obvious over Wang, Quick, and Wisnieski. Final Act. 9. In this rejection, the Examiner's findings with respect to Wang and Quick are the same as those in Rejection I discussed above. Final Act. 9–10. The Examiner further finds that

> Wisnieski discloses a massager with a plurality of projections which are configured to "repeatedly and alternately stretch and compress the skin, muscles and tendons" to "achieve effective and efficient massaging" . . . and provide "a large number of uncommon movements to muscle and nerve stimulation" and "provide massage by a multiaction effect including friction, pressure, kneading and stroking of muscle zones". . . . While Wisnieski is disclosed as being primarily for a foot of a user, *the teaching of using projections to extend into the soft tissue* for the effective and efficient massaging is a teaching that the projections of Wang are capable of being configured to

> extend into the soft tissue of a user to enhance mobilization of soft tissue and optimize body core strength and balance training.

Final Act. 10 (emphasis added); *see also* Wisnieski, col. 1, ll. 14–18. In other words, the Examiner finds that the protuberances of Wisnieski are configured to "extend into the soft tissue" as claimed because they massage and compress muscles and tendons. Based thereon, the Examiner finds that the protuberances of Wang are also "capable of being [so] configured," and concludes that "it would have been obvious to one o[f] ordinary skill in the art to make the projections of Wang configured to extend into the soft tissue of a user to enhance mobilization of soft tissue and optimize body core strength and balance training as taught by Wisnieski." Final Act. 10.

Thus, this rejection substantially mirrors Rejection I discussed above, but with Iyomasa being substituted with Wisnieski. The Appellant's arguments likewise substantially mirror those submitted with respect to Rejection I. Appeal Br. 90–119. We find this rejection to be deficient for reasons similar to Rejection I in that Wang does not disclose protrusions extending into soft tissue, and Wisnieski's disclosure of compression and massage of muscles and tendons by its protuberances is insufficient to establish extension of the projections into muscles and tendons, i.e., soft tissue. Moreover, as already discussed, contrary to the Examiner's finding, Wang fails to disclose an overlay made of closed cell foam, plastic, or rubber material as required by the independent claims. The Examiner does not set forth any articulated reason with rational underpinnings as to why it would have been obvious to a person of ordinary skill in the art to further modify the protrusions of Wang in view of Quick and Wisnieski to extend into soft tissue.

Therefore, in view of the above, we reverse the Examiner's rejection of claims 1–31 as being obvious over the combination of Wang, Quick, and Wisnieski. The remaining arguments of the Appellant are moot.

Rejections III–VI

Claims 1–22 and 24 stand rejected as obvious over Quick and Doherty (Rejection III); claims 1–22 and 24 stand rejected as obvious over Quick and Bajette (Rejection IV); claims 1–4, 6–11, 21, 22, and 24 stand rejected as obvious over Quick and Sawtelle (Rejection V); and claim 23 stands rejected as obvious over Quick, Doherty, and Wisnieski (Rejection VI). Final Act. 14, 18, 22, 24. Thus, each of the rejections are based on modifying Quick to include projections in view of a secondary reference, the rejection of claim 23 further relying on Wisnieski for the recited dimensions of the projections. *Id.*

As an example, in rejecting independent claim 1 over the combination of Quick and Doherty, the Examiner finds that Quick discloses the device including

> the overlay made of closed cell foam, rubber, or plastic . . . configured to extend into soft tissue of a user to enhance mobilization of soft tissue and optimize body core strength and balance training (the foam roller would inherently extend into soft tissue of the user and is disclosed as a device for increasing strength of the user; balance training would be a natural result of the use of the device).

Final Act. 14–15. The Examiner concedes that Quick "does not disclose a plurality of solid projections having a predetermined shape configured to extend into soft tissue of a user," but finds that Doherty discloses a similar device that includes "a plurality of solid projections . . . having a

predetermined shape configured to extend into soft tissue of a user." Final Act. 15 (citing Doherty col. 2, l. 64–col. 3, l. 15 ("for varying pressure applied" and "for applying pressure to localized areas"); Fig. 4). The Examiner concludes that "it would have been obvious to one of ordinary skill in the art to include projections on the overlay as taught by Doherty. . . . The motivation would have been to vary the pressure applied or applying pressure to localized areas." Final Act. 15.

The Appellant argues, *inter alia*, that "there is simply no evidence or logical reason to conclude that Quick's infant exercise roller extends into the soft tissues." Appeal Br. 127; *see also* Reply Br. 11. The Appellant relies on the disclosure of Quick and the testimonies of Dr. Abbott and Mr. Graston in support of its position that Quick does not inherently disclose a roller that extends into soft tissue of a user. In particular, the Appellant points out that Quick is directed to a "cushion" having a "soft resilient material." Appeal Br. 128–129; *see also* Quick Abst.; First Suppl. Decl. Abbott ¶¶ 43, 44; Decl. Graston ¶ 28.

Again relying on the disclosure of Quick and the declaration evidence of record, the Appellant argues that the proposed modification of providing protrusions that extend into soft tissue would render Quick unsuitable for its intended purpose of providing a comfortable support to an infant for increasing upper body strength, and that a person of ordinary skill in the art would not have been motivated to combine the references as suggested to provide projections that extend into soft tissue because adding such projections would potentially harm, injure, and/or cause pain to an infant. Appeal Br. 131–134, 136, 138; *see also* Quick col. 1, ll. 11–13, col. 2, ll. 43–45; First Suppl. Decl. Abbott ¶ 45; Decl. Wilson ¶ 40. Specifically, the

Appellant argues that "[t]he goal [of Quick] is to provide a comfortable surface for the baby, which cannot be accomplished if there are projections that extend into the baby's muscle, fascia, and tendons," and that "[a] person of ordinary skill in the art at the time of the invention, would not have been motivated to superimpose or place projections configured to extend into soft tissue onto such an infant exercise cushion device out of fear of injuring the soft tissue or causing pain to the infant." Appeal Br. 134, 136.

We find the Appellant's arguments and the above-noted testimonies of the declarants persuasive. It is unclear to us how Quick's disclosure of its "cylindrically shaped infant roll cushion" having "[a] thick soft resilient material such as foam rubber" that covers the core, and a "[f]abric [that] covers the foam rubber" inherently discloses a roller that extends into soft tissue of the user. *See* Quick, col. 2, ll. 38–46. The Examiner does not point to any specific disclosure in Quick that suggests that infant roll cushion has the structural characteristics that necessarily results in a roller that extends into soft tissue. In that regard, mere disclosure that the infant roll cushion includes a resilient material of "foam rubber" is inadequate to establish inherency considering that resiliency of foam rubber can vary widely. *See In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) ("Inherency, however, 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." (citations and internal quotation marks omitted)). To the contrary, the described use of the roller by an infant (which is not heavy) and the roller's characteristics as being a "cushion" with a "thick soft resilient material" suggests that Quick's roll cushion would not inherently extend into soft tissue when used. *See* First Supp. Decl. Abbott ¶ 44 ("The *Quick* cushion

would need to be relatively deformable given its application to infants and the need for gentle support.").

Moreover, it is not apparent to us, nor has the Examiner adequately addressed, why a person of ordinary skill in the art would have modified Quick's infant roll cushion to include projections that would extend into soft tissue. As Dr. Abbott testifies,

> Infants are not miniature adults. . . . [I]nfant thoracic walls are thinner and ribs more elastic than those of adults. . . . [I]nternal organs in infant abdomens have developing and have immature structures, large organ relationships, and minimal overlying muscle and skeletal protection (the relatively positioning of internal organs, such as the bladder, are different from those of adults vis-a-vis the surrounding bony structures) to shield from abdominal injury. A device using projections that extends into and mobilizes soft tissue is capable of causing pain and injury in infants.

First Supp. Decl. Abbott ¶ 45; *see also* Decl. Wilson ¶ 40 ("any addition of projections to the infant exercise cushion would have been thought to potentially harm, injure and/or cause pain in an infant.").

The Examiner points out that "Wang (prior art at the time of the invention) shows that it is known for a child to use a foam roller with or without projections." Ans. 28. Notwithstanding the fact that for reasons discussed above, Wang fails to disclose projections that extend into soft tissue, we are persuaded by the Appellant's rebuttal that although Wang discloses "a roller that is appropriate for children . . . *Wang* shows children using the device that are clearly older than infants and contains no teaching that the device is intended for use by infants." Reply Br. 46–47.

Thus, we are persuaded that a person of ordinary skill in the art would not have been motivated to modify the infant roll cushion of Quick to

include projections such as that shown in Doherty, or otherwise provide projections that extend into soft tissue, because that would render the roll cushion unsuitable for its intended purpose, i.e. being an exercise device for infants. Accordingly, we reverse the Examiner's rejection based on the combination of Quick and Doherty. The Appellant's further arguments regarding this rejection, and the Examiner's responses thereto, are moot.

Furthermore, the issues presented in the rejections of various claims based on the combination of: Quick and Bajette (Rejection IV); Quick and Sawtelle (Rejection V); and Quick, Doherty, and Wisnieski (Rejection VI), are substantially the same as those addressed above relative to the combination of Quick and Doherty (Rejection III) in that each rejection is based on modifying Quick to include projections as present in the secondary references. *See* Final Act. 18–24; Appeal Br. 140–183. Therefore, we reverse Rejections IV–VI for substantially the same reasons discussed above relative to Rejection III. The Appellant's remaining arguments asserting lack of substantial new questions of patentability, and the Examiner's responses thereto, are moot. Appeal Br. 192–205; Ans. 32–33.

CONCLUSION

The Examiner's rejections are reversed.

DECISION SUMMARY

The following table summarizes our decision:

Claim(s) Rejected	35 U.S.C. §	Reference(s)/ Basis	Affirmed	Reversed
1–22, 24–29	103(a)	Wang, Quick, Iyomasa		1–22, 24–29
1–31	103(a)	Wang, Quick, Wisnieski		1–31
1–22, 24	103(a)	Quick, Doherty		1–22, 24
1–22, 24	103(a)	Quick, Bajette		1–22, 24
1–4, 6–11, 21, 22, 24	103(a)	Quick, Sawtelle		1–4, 6–11, 21, 22, 24
23	103(a)	Quick, Doherty, Wisnieski		23
Overall Outcome				1–31

REVERSED

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