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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 2023-003494
Reexamination Control 90/014,616[1]
Patent US 10,278,890 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: 90/014,621 of US 9,539,167 B2 (Appeal 2023-003470); 90/014,620 of US 9,656,112 B2 (Appeal 2023-003471); and 90/014,614 of US 10,695,260 B2 (Appeal 2023-003493). Appeal Br. 1.

[2] Hereinafter "the '890 Patent" (Issued May 7, 2019 to Dye).

[3] We are informed that the '890 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 '890 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, Patent Owner (Appellant)[4] appeals from the Examiner's decision to reject claims 1–25. *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 free standing therapeutic, fitness, and sports enhancement device comprising:
>
> a free standing entirely cylindrical shaped core having a first end and a second end, made of closed cell foam, rubber, or plastic and having a diameter of about 3 inches to about 15 inches; and
>
> an overlay completely surrounding the core from about the first end to about the second end, the overlay made of closed cell foam, rubber, or plastic and including a plurality of solid projections having a predetermined shape configured to extend into soft tissue of a user to enhance mobilization of soft tissue and optimize core strength and balance training.

Appeal Br. 209 (Claims App.).

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

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	25	112	Written Description
II	1–24	103(a)	Wang, Quick, Iyomasa
III	1–24	103(a)	Wang, Quick, Wisnieski
IV	1–20	103(a)	Quick, Doherty
V	1–20	103(a)	Quick, Bajette
VI	1, 8–14, 16–20	103(a)	Quick, Sawtelle

OPINION

Written Description

The Examiner rejects claim 25 under 35 U.S.C. § 112, first paragraph, for failing to comply with the written description requirement. Final Act. 4. Claim 25 depends from claim 1 and recites "wherein said soft tissue is tissue below subcutaneous fat." Appeal Br. 211 (Claims App.). The Examiner finds that while the Specification "defines soft tissue as 'muscles, tendons, ligaments fascial of the human body and the like,'" it does not disclose subcutaneous fat such that "[t]his is new matter." Final Act. 4.

The Appellant "acknowledge[s] that the specification does not recite verbatim the claim limitation 'tissue below subcutaneous fat,'" but correctly points out that verbatim disclosure is not required for written descriptive support as long as "a person of ordinary skill, reading the '890 Patent, would understand that Dye invented what was claimed." Appeal Br. 70. The Appellant argues that "[b]ased on the evidence on the record, it is clear that those of ordinary skill in the art understand the specification to describe soft tissues beneath the subcutaneous fat layer." Appeal Br. 71. In further support of its argument, the Appellant specifically relies on the declaration of Mr. Graston who testified that

> I would consider the '890 Patent to be a form of enhanced mobilization of soft tissue or self-mobilization of soft tissue. This means the device has the ability to treat soft tissue beneath the skin and subcutaneous fat. To illustrate, a foam roller that has projections from the roller surface as described in the '890 Patent allows for mobilization of soft tissue beneath the skin and subcutaneous fat using projections that work like fingers and thumbs of a therapist performing soft tissue mobilization.

Decl. Graston ¶ 18. The Appellant argues that this testimony is "virtually irrefutable evidence that one skilled in the art would understand the '890 patent to describe projections that impact soft tissue beneath the skin and subcutaneous fat" as claimed. Appeal Br. 71.

The Examiner responds that the Specification merely discloses mobilization of soft tissues such as various muscles including quadriceps, hamstrings, rhomboids, etc., and that the Appellant "is relying on statements of third parties to establish written description support." Ans. 29 (citing Spec. col. 7, ll. 10–39). The Appellant responds that "by the Examiner's own words, the invention is clearly directed towards the layers of human

tissue located below subcutaneous fat," and that "by acknowledging that the proper definition of soft tissue . . . is muscles, fascia, tendons and ligaments, all of which exist below subcutaneous fat, the Examiner has further confirmed her understanding that the invention is designed to extend into layers of human tissue below subcutaneous fact." Reply Br. 102.

The Appellant has the better position. Not only is it common knowledge that various muscles such as those noted in the Specification are beneath the skin and fat beneath the skin, Mr. Graston has specifically testified his understanding that the claimed projections extend into soft tissues that are beneath the skin and subcutaneous fat.[5] Contrary to the Examiner's response, the Appellant is not relying on the testimony of Mr. Graston to establish written descriptive support, but rather, is establishing what a person of ordinary skill in the art would have understood the inventor's invention to be in view of the Specification. Therefore, we reverse the written description rejection of claim 25.

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.

[5] In view of the record and the Appellant's arguments establishing that "soft tissue" is below the skin and subcutaneous fat, it is not apparent how claim 25 further limits independent claim 1 to meet the requirement of pre-AIA 35 U.S.C. § 112, 4th paragraph or 35 U.S.C. § 112(d).

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. 13 (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. 39–40 (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. 39. 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. 26. 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 "claims do not recite the specific shape or length of the projections. The claims are silent as to the density." Ans. 27–28. Indeed, the independent claims do not recite a particular shape, size, or density of the projections. However, as the Examiner acknowledges, the Specification discloses that "it is the 'one or

more of the predetermined density and the predetermined diameter in combination with the predetermined shape of the projections [that] effectively mobilize soft tissue structures." Ans. 24 (quoting Spec. col. 5, ll. 53–56). In that regard, the shape of the projection recited in the claim 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. 31. For example, as noted by the Examiner, the Specification discloses that:

> One or more of the predetermined density and the predetermined diameter of body **12** in combination with the shape of the projections effectively mobilize soft tissue structures of the human body . . . the density of body **12**, the diameter, d-**13**, FIG. **2**, of body **12** in combination with and the shape of projections **14** are preferably chosen to effectively mobilize soft tissue structures of the human body. . . . the density of the pliable material of body 12 is preferably in the range of about 2.0 lb/ft^3 to about 6.0 lb/ft^3.

Spec. col. 5, l. 53–col. 6, l. 11. Furthermore, the Specification discloses that the projections extend radially about 1/8" to about 3" from the body. *See* Spec. col. 6, ll. 37–39. 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

[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).

size, in addition to its shape.[7] *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."). Moreover, in view of the above construction of "configured to," the Examiner does not explain the basis for why explicit

[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 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. 93 (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.").

recitations of each of the required parameters would be required. *See* Reply Br. 14–16.

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. 87 (emphasis omitted) (quoting First Supp. Decl. Abbott ¶ 18). 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, in view of the above, 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 II

The Examiner rejects claims 1–24 as being obvious over the combination of Wang, Quick, and Iyomasa. Final Act. 5. The Examiner finds that Wang discloses the device substantially claimed, "including a plurality of solid projections (14) having a predetermined shape configured to extend into soft tissue (Translation, paragraph 20, 'to massage') of a user to enhance mobilization of soft tissue and optimize body core strength and balance training." Final Act. 5. The Examiner concedes that Wang "does not disclose the dimensions of the massage device." Final Act. 5. 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. 5–6 (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 core strength and balance training.

Final Act. 6 (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 "[i]t 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 as taught by Iyomasa." Final Act. 6.

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. 5–6. 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. 72. 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. 77. 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 ¶ 51 ("[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. 30–31 (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. 31 (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 or necessarily associated with extension into soft tissue," and as such, Iyomasa also fails to disclose projections that are configured to extend into soft tissue. Appeal Br. 88 (quoting First Supp. Decl. Abbott ¶ 23); *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 ¶¶ 15–19; *see also* Appeal Br. 85–87. 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. 78. 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. 78; *see also id.* ("Closed-cell foam has higher resistance to compression suitable for extending into soft tissue of a user."). 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. 32.

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 1–24 as obvious over the combination of Wang, Quick, and Iyomasa. The remaining arguments of the Appellant are moot.

Rejection III

The Examiner rejects claims 1–24 as being obvious over Wang, Quick, and Wisnieski. Final Act. 10. In this rejection, the Examiner's findings with respect to Wang and Quick are the same as those in Rejection II discussed above. Final Act. 10–11. 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.

Final Act. 11–12 (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 or ordinary skill in the art to make the projections of Wang configured to extend into the soft tissue of a user as taught by Wisnieski." Final Act. 12.

Thus, this rejection substantially mirrors Rejection II discussed above, but with Iyomasa being substituted with Wisnieski. The Appellant's arguments likewise substantially mirror those submitted with respect to Rejection II. Appeal Br. 95–120. We find this rejection to be deficient for reasons similar to Rejection II 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 1–24 as being obvious over the combination of Wang, Quick, and Wisnieski. The remaining arguments of the Appellant are moot.

Rejections IV–VI

Claims 1–18 stand rejected as obvious over Quick and Doherty (Rejection IV); claims 1–18 stand rejected as obvious over Quick and Bajette (Rejection V); and claims 1, 8–14, and 16–20 stand rejected as obvious over Quick and Sawtelle (Rejection VI). Final Act. 16, 20, 24. Thus, each of the rejections are based on modifying Quick to include projections in view of a secondary reference. *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." Final Act. 16. 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. 16 (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. 17.

The Appellant, relying on the disclosure of Quick and the declaration evidence of record, 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. 132–141, 144, 159; *see also* Quick col. 1, ll. 11–13, col. 2, ll. 43–45; First Suppl. Decl. Abbott ¶ 50; 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. 135, 137–138.

We find the Appellant's arguments and the above-noted testimonies of the declarants persuasive. 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 ¶ 48; *see also* Decl. Wilson ¶ 39 ("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. 30. 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. 51.

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 V); and Quick and Sawtelle (Rejection VI), are substantially the same as those addressed

above relative to the combination of Quick and Doherty (Rejection IV) in that each rejection is based on modifying Quick to include projections as present in the secondary references. *See* Final Act. 20–27; Appeal Br. 146–188. Therefore, we reverse Rejections V and VI for substantially the same reasons discussed above relative to Rejection IV. The Appellant's remaining arguments asserting lack of substantial new questions of patentability, and the Examiner's responses thereto, are moot. Appeal Br. 201–207; Ans. 34–36.

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
25	112	Written Description		25
1–24	103(a)	Wang, Quick, Iyomasa		1–24
1–24	103(a)	Wang, Quick, Wisnieski		1–24
1–20	103(a)	Quick, Doherty		1–20
1–20	103(a)	Quick, Bajette		1–20
1, 8–14, 16–20	103(a)	Quick, Sawtelle		1, 8–14, 16–20
Overall Outcome				1–25

REVERSED

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