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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DANIEL THOMAS DUARTE

Appeal 2019-003927
Application 14/857,622
Technology Center 3700

Before JILL D. HILL, LEE L. STEPINA, and
ARTHUR M. PESLAK, *Administrative Patent Judges*.

STEPINA, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1–6, 8–10 and 15–19. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE and enter a new ground of rejection pursuant to 37 C.F.R. § 41.50(b).

¹ We use the word “Appellant” to refer to “Applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as the inventor, Daniel Thomas Duarte. Br. 2.

CLAIMED SUBJECT MATTER

The claims are directed to a suspension bridging shoe. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A shoe for receiving a foot, wherein the shoe is configured to simulate barefoot running by the cooperation of a set of shoe elements comprising:

an outer sole configured to separate and protect the foot from a ground when the shoe receives the foot and having a forefoot portion and a heel portion, the forefoot and heel portions being configured to have a point of contact with the ground and to support the foot when the shoe receives the foot, the forefoot portion having a high toe spring that allows forefoot landing and a rounded edge that allows landing on lateral forefoot, and a flexible bridge portion extending between the forefoot portion and the heel portion, such that to form a continuous outer sole, the flexible bridge portion having a medial and a lateral side and corresponding lengthwise to the foot's lateral and medial longitudinal arches, wherein the flexible bridge portion of the outer sole is curved inwards on the medial and lateral sides and is thus narrower than the forefoot portion and the heel portion of the outer sole and also narrower than the foot on both the lateral and medial sides, thus allowing the foot's lateral and medial longitudinal arches to be both exposed to a wrap overlay, wherein the flexible bridge portion of the outer sole is flexible in all directions, such that to allow the flexible bridge portion of the outer sole to conform to the foot's lateral and medial longitudinal arches curvatures by the flexible bridge portion of the outer sole being lifted off the ground and toward the foot's lateral and medial longitudinal arches when the shoe is tied onto the foot, such that to prevent compressive force to be exercised by the ground onto the flexible bridge portion of the outer sole and thus onto the foot's lateral and medial longitudinal arches;

the wrap overlay also corresponding lengthwise to the foot's lateral and medial longitudinal arches and being associated with the flexible bridge portion and having at least a first strap and at least a second strap, wherein at least the first strap is configured to be wrapped around a lateral side of the foot and at

least the second strap is configured to be wrapped around a medial side of the foot, wherein at least the first and at least the second straps are configured to be tied atop a metatarsal area of the foot, to create a 360 degrees wrap formed by the flexible bridge portion of the outer sole being conformed to the foot's lateral and medial longitudinal arches curvatures and by at least the first and at least the second straps, and being suspended from atop the metatarsal area of the foot, such that to transfer tensile forces from at least the first and at least the second straps as compressive forces into the forefoot and heel portions of the outer sole, and to provide the 360 degrees wrap of the foot in a section of the foot corresponding to the foot's lateral and medial longitudinal arches resulting in both support of the foot's lateral and medial longitudinal arches and the shoe's anchoring to the foot;

and, a shoe upper configured to provide toe splay and facilitate forefoot-landing by having a roomy and untied toe box corresponding to the forefoot portion of the outer sole, which is wider than the rest of the outer sole.

Claim App. 25–27.

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Glidden	US 2,147,197	Feb. 14, 1939
Parker	US 5,692,319	Dec. 02, 1997
Csorba	US 2004/0181972 A1	Sept. 23, 2004
Keen	US 2007/0011914 A1	Jan. 18, 2007

REJECTIONS

- I. Claim 19 is rejected under 35 U.S.C. § 112(b) as indefinite.
- II. Claim 19 is rejected under 35 U.S.C. § 102(a)(1) as anticipated by Glidden.

III. Claims 1, 2, 8–10, 15, 16, and 18 are rejected under 35 U.S.C. § 103 as unpatentable over Glidden and Keen.

IV. Claims 3, 6, and 17 are rejected under 35 U.S.C. § 103 as unpatentable over Glidden, Keen, and Parker.

V. Claims 4 and 5 are rejected under 35 U.S.C. § 103 as unpatentable over Glidden, Keen, Parker, and Csorba.

OPINION

Rejection I – Claim 19 – Indefiniteness

The Examiner determines that the claim 19 limitations “means for receiving a foot” and “means for simulating barefoot running” invoke 35 U.S.C. § 112(f), but that the Specification does not “disclose the corresponding structure, material, or acts for performing the entire claimed function and to clearly link the structure, material, or acts to the function.”
Final Act. 3.

Appellant asserts that the Specification identifies structure that performs the functions recited in claim 19. Br. 22. Specifically, Appellant asserts:

As indicated in the above summary of claim 19, the means for simulating barefoot running include, among other structural elements, a flexible portion of the outer sole of the shoe corresponding to the arch of the foot (“flexible bridge”) (*See*, e.g., Spec. para. [0025], [0026], FIG. 2b, ref. 207-b) with its structural features (thinner and narrower than the forefoot and heel portions of the outer sole of the shoe and a high toe spring (*See*, e.g., Spec. para. [0032], FIG. 6, ref. 619), that allows the forefoot landing.

Br. 22–23.

A rejection under 35 U.S.C. § 112(b) is appropriate if the written description fails to link or associate the disclosed structure, material, or acts to the claimed function, or if there is no disclosure (or insufficient disclosure) of structure, material, or acts for performing the claimed function. *See In re Donaldson Co.*, 16 F.3d 1189, 1195 (Fed. Cir. 1994). The disclosure must be reviewed from the point of view of one skilled in the relevant art to determine whether that person would understand the written description to disclose the corresponding structure, material, or acts. *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1338 (Fed. Cir. 2008); *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1211–12 (Fed. Cir. 2003). Here, as to the recited “means for receiving a foot,” Figures 2a–2c, 3, and 4a–4c show a foot inserted into the shoe, and Figure 5 illustrates a fully assembled shoe including an upper 510, an overlay 505, and a sole 507, as well as laces 512 that “may be tied to secure the shoe to the foot.” Spec. ¶ 30; *see also* Br. 5–6. Because the Specification discloses using a shoe in a conventional manner in which a foot is inserted into an upper so that the toes of the foot extend to the forefoot region and the heel of the foot is at the heel of the sole, with the laces tied to secure the shoe to the foot, one of ordinary skill in the shoe art would understand that the written description discloses the corresponding structure for performing the function of receiving a foot.

As to the recited “means for simulating barefoot running,” Appellant refers to several paragraphs in the Specification to support this limitation. *See* Br. 5–7. Specifically, Appellant refers to paragraphs 3, 6, 24–26, 28, 29, and 32. Br. 6–7. However, the term “barefoot running,” or how this term relates to the suspension bridge is not specified in paragraphs 24–25, and

Appellant does not explain how these paragraphs correspond to barefoot running. Nonetheless, paragraph 3 of the Specification discloses that there is a need for a shoe that “allows for an unencumbered toe box which facilitates free feel, ‘toe splay’ and forefoot-striking running resembling barefoot running.” Spec. ¶ 3. The Specification discloses that the shoe provides “several simultaneous benefits during running: toe splay, free feel and forefoot-striking, which mimic barefoot running.” Spec. ¶ 6. The Specification discloses that “[t]he toes are unwrapped, creating a roomy toe box and allowing for toe splay, an important component of barefoot running.” *Id.* The Specification also discloses that “a roomy toe box [] may help to mimic barefoot running,” and that “a roomy toe box [] facilitate[s] forefoot-striking running.” Spec. ¶¶ 28 and 29. Thus, a roomy toe box, sufficient for toe splay, and that facilitates forefoot-striking running is a first structural element that simulates barefoot running.

The Specification also discloses that “[t]he shoe 611 may have a high toe spring 619, such that the toes are lifted off of the ground 620, in order to facilitate barefoot running.” Spec. ¶ 32. Thus, a high toe spring, such that the toes are lifted off the ground is a second structural element that simulates barefoot running. One of ordinary skill in the shoe art would understand that the written description discloses that these two elements are the corresponding structure for simulating barefoot running. Because the Specification discloses structure for performing the claimed functions, and the Examiner does not explain why the disclosed structure is insufficient for performing the claimed functions, we do not sustain the rejection of claim 19 as being indefinite.

Rejection II – Anticipation by Glidden

As the entire basis for rejecting claim 19 as anticipated by Glidden, the Examiner finds that “Glidden discloses a shoe comprising means for receiving a foot and means for simulating barefoot running (Figure 8).”
Final Act. 5.

Appellant argues that it appears that the Examiner “impermissibly construed the recited means as ‘any means’ capable of performing the recited function, completely disregarding the structure disclosed by the instant application.” Br. 21. According to Appellant, the Examiner failed “to interpret claim 19 by looking at the specification and identifying the structure presumed by the Office to perform the recited functions.” Br. 22.

To reject a claim as anticipated by a reference, the disclosure must teach every element required by the claim under its broadest reasonable interpretation. *See, e.g.,* MPEP § 2114, subsections II and IV. Here, we agree with Appellant that the Examiner does not identify the structure of Glidden that performs the function of “simulating barefoot running.” Nor does the Examiner point to any disclosure of Glidden that expressly suggests simulating barefoot running. Because the Examiner does not identify the structure in Glidden’s Figure 8 that simulates barefoot running, the Examiner’s rejection is based on speculation because there is insufficient evidence to establish that this feature is present. Moreover, based on the broadest reasonable construction of “means for simulating barefoot running,” two aspects are required; namely, 1) a roomy toe box, sufficient for toe splay, and that facilitates forefoot-striking running, and 2) a high toe spring, such that the toes are lifted off the ground. The Examiner does not find that Glidden has a high toe spring. Rather, the Examiner states that

“Glidden does not disclose the forefoot portion having a high toe spring.”
Final Act. 8. Accordingly, we do not sustain the Examiner’s rejection of claim 19 as anticipated by Glidden.

Rejection III – Obviousness – Glidden and Keen

The Examiner finds that Glidden discloses many limitations of the claimed shoe, including an outer sole having a forefoot portion and a heel portion. Final Act. 6–8. The Examiner notes that although “Glidden does not disclose the forefoot portion having a high toe spring that allows forefoot landing and toe box which is wider than the rest of the outer sole,” Keen does disclose these features. *Id.* at 8–9. The Examiner concludes that it would have been obvious “to widen and extend the toe box and include a high toe spring to the shoe of Glidden, as taught by Keen, in order to provide more room and flexibility in the toe region of the shoe.” *Id.* at 9.

Appellant argues, *inter alia*, that several claim limitations are not taught. Br. 12. Specifically, Appellant contends that Glidden and Keen do not disclose that the flexible bridge is narrower than the foot on both the lateral and medial sides. Br. 14. Appellant asserts that the Examiner’s position that “the shoe will fit differently sized feet in different manners” (Final Act. 7) is incorrect because the claimed shoe has a design that “ensures that it is narrower than any feet, irrespective of variations if[sic] foot shape or size.” *Id.* According to Appellant, the claim requires “allowing the foot’s lateral and medial longitudinal arches to be both exposed to a wrap overlay.” *Id.*

The Examiner responds that “when a user ties the straps around the arch area; the flexible bridge is further narrowed towards both side of the

foot to secure the arch area.” Ans. 5. According to the Examiner, “most shoes, even the ones a user is wearing now, have narrower bridge areas on the medial and lateral sides to fit and support a user natural anatomy. Such a feature is well known in the art.” Ans. 5–6.

Appellant has the better position. There is no per se rule prohibiting defining claimed subject matter in terms of its interaction with some unclaimed subject matter. However, limitations defining unclaimed subject matter interacted with, like claim limitations generally, must make it clear to one of ordinary skill in the art what the claims encompass. Here, one of ordinary skill in the art would understand that the claims encompass a shoe that matches the user’s foot that is received by the shoe, so that, for example, a user with a size 10 foot would use a size 10 shoe. *See* Br. 25 (Claims App.) (“the forefoot and heel portions being configured to ... support the foot when the shoe receives the foot.”) As to the limitation at issue, Appellant’s Specification discloses that flexible bridge 307-b is “narrower than the foot 306 on both the lateral 306-b and medial 306-a sides, allowing the foot 306 to be exposed on both sides.” Spec.¶ 28. Appellant’s Figure 3, reproduced below, shows the claimed flexible bridge interacting with the unclaimed foot.

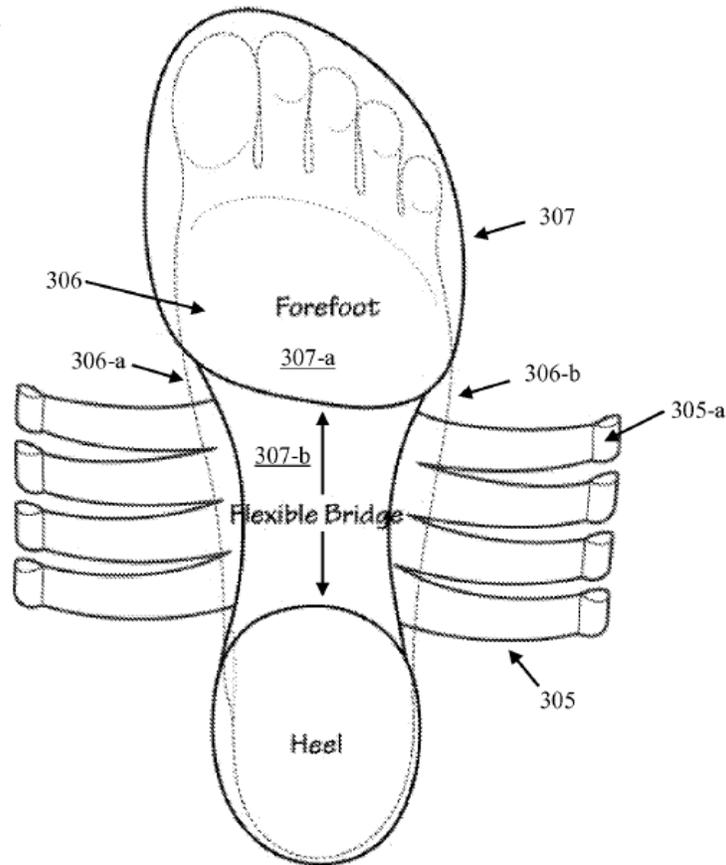


FIG. 3

Figure 3 illustrates a bottom view of a suspension bridging shoe.
Spec. ¶ 16.

As seen in Figure 3, flexible bridge 307-b is narrower than foot 306 on both lateral side 306-b and medial side 306-a, which allows foot 306 to be exposed on both of these sides. Thus, the limitation “the flexible bridge portion of the outer sole is ... narrower than the foot on both the lateral and medial sides,” requires the foot to be exposed on both the lateral and medial sides. The Examiner does not identify any evidence of record supporting a finding that “most shoes” exhibit this feature and that this feature “is well known in the art.” Because the Examiner does not provide evidence to

support a finding that the flexible bridge portion of the outer sole is narrower than the foot on both the lateral and medial sides, we do not sustain the rejection of claim 1 as unpatentable over Glidden and Keen.

Independent claim 15 recites an element substantially similar to the one discussed above regarding claim 1. *See* Br. 29 (Claims App.). Accordingly, we do not sustain the rejection of claim 15 as unpatentable over Glidden and Keen. Claims 2 and 8–10 depend from claim 1, and claims 16 and 18 depend from claim 15, and we likewise do not sustain the rejection of these claims as unpatentable over Glidden and Keen.

Rejections IV and V

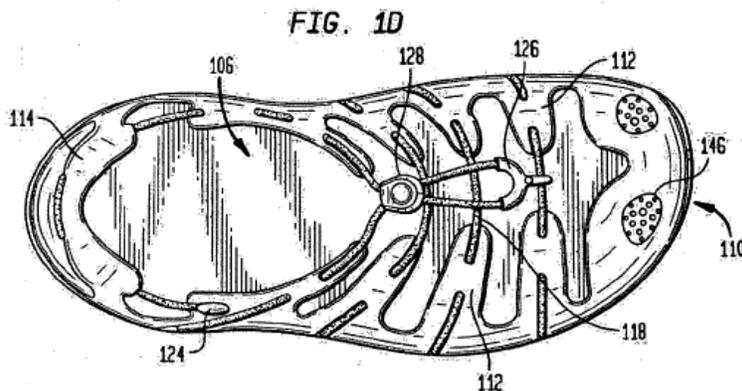
The Examiner does not rely on Parker and Csorba in any way that would remedy the deficiency in Rejection III discussed above. *See* Final Act. 14–16. Accordingly, we do not sustain the rejection of claims 3, 6, and 17 as unpatentable over Glidden, Keen, and Parker, and the rejection of claims 4 and 5 as unpatentable over Glidden, Keen, Parker, and Csorba for the same reasons.

NEW GROUND OF REJECTION

As discussed above, the Examiner did not establish the structure of Glidden that performs the function of “simulating barefoot running,” as required to anticipate claim 19. However, we find that Keen discloses all of the structural elements of claim 19. Specifically, Keen discloses means for receiving a foot in that Keen includes “a superstructure at least partly defining an enclosure for receiving a wearer’s foot.” Keen ¶ 9. Keen’s

superstructure includes an outsole 102, an upper 104a, and an overlay 112. Keen ¶¶ 46 and 52, Fig. 1a.

Keen also discloses means for simulating barefoot running. Specifically, Keen discloses shoes “fit for a multitude of activities, including climbing, hiking walking, scrambling and water related activities. Water related activities include, but are not limited to, sailing, trekking, fishing, river running, kayaking, golfing, walking, swimming, adventure racing, biathlons, triathlons, etc.” Keen ¶ 8. At least adventure racing and triathlons involve running. As to simulating barefoot running, as discussed above, based on the broadest reasonable construction in light of the Specification of “means for simulating barefoot running,” two aspects are required, namely, 1) a roomy toe box, sufficient for toe splay, and that facilitates forefoot-striking running, and 2) a high toe spring, such that the toes are lifted off the ground. *See Spec.* ¶¶ 6 and 32. We agree with the Examiner that Keen discloses a roomy toe box, namely, Keen discloses “a toe box which is wider than the rest of the outer sole.” Final Act. 9 (citing Keen, Fig. 1D, reproduced below).



Keen’s Figure 1D illustrates a top view of the assembled article of footwear 100. Keen ¶ 53.

Keen's toe box is unwrapped because laces 118 extending through fingers 112 are tied at the top of the shoe, and are outside the toe box because they are spaced from toe cover 110. Keen discloses that "[t]he fit of articles of footwear of the present invention can accommodate variances in forefoot height and girth expected within the general population while providing a secure and comfortable fit for each wearer." Keen ¶ 53. Keen also discloses that "fingers 112 enable fit adjustment, with an emphasis on foot instep adjustment as well as midfoot and forefoot width adjustment." *Id.* Given that Keen discloses an unwrapped toe box that is wider than the rest of the outer sole and can accommodate variances in forefoot girth, Keen suggests a shoe having a roomy toe box. In addition, we agree with the Examiner that "during a natural gait a user's toes naturally should splay. When a user is in the toe-off motion in running or walking; the weight of a user in addition to the pressure on a user's toe will provide toe splay action." Ans. 8. Thus, Keen's roomy toe box would provide toe splay and facilitate forefoot-landing. *See* Spec. ¶ 29 ("a roomy toe box to facilitate forefoot-striking running.").

Keen also discloses a high toe spring such that the toes are lifted off the ground. Specifically, Figure 1C of Keen shows a shoe that curves upward at the forefoot so that the toes are lifted off the ground. *See* Final Act. 13. Although Appellant argues that Keen's toes spring is around 10 degrees whereas Appellant shows "a true high toe spring (e.g., around 30 degrees)" (Br. 16), all that is required of the toe spring is that the toes are lifted off the ground. Spec. ¶ 32 ("The shoe 611 may have a high toe spring 619, such that the toes are lifted off of the ground 620, in order to facilitate

barefoot running.”) Appellant does not disclose values that define “high toe spring.”

For these reasons, Keen discloses means for receiving a foot and means for simulating barefoot running under a broadest reasonable interpretation of these terms consistent with the Specification. Accordingly, we enter a new ground of rejection of claim 19 as anticipated by Keen.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed	New Ground
19	112(b)	indefinite		19	
19	102(a)(1)	Glidden		19	
1, 2, 8–10, 15, 16, 18	103	Glidden, Keen		1, 2, 8–10, 15, 16, 18	
3, 6, 17	103	Glidden, Keen, Parker		3, 6, 17	
4, 5	103	Glidden, Keen, Parker, Csorba		4, 5	
19	102(a)(1)	Keen			19
Overall Outcome				1–6, 8–10, 15–19	19

FINALITY OF DECISION

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). Section 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.” Section 41.50(b) also provides:

When the Board enters such a non-final decision, the appellant, within two months from the date of the decision, must exercise

one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner. The new ground of rejection is binding upon the examiner unless an amendment or new Evidence not previously of Record is made which, in the opinion of the examiner, overcomes the new ground of rejection designated in the decision. Should the examiner reject the claims, appellant may again appeal to the Board pursuant to this subpart.

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same Record. The request for rehearing must address any new ground of rejection and state with particularity the points believed to have been misapprehended or overlooked in entering the new ground of rejection and also state all other grounds upon which rehearing is sought.

Further guidance on responding to a new ground of rejection can be found in the Manual of Patent Examining Procedure § 1214.01.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). See 37 C.F.R. § 1.136(a)(1)(iv).

REVERSED; 37 C.F.R. § 41.50(b)