United States District Court,
D. New Hampshire.

J. DANANBERG,
v.
PAYLESS SHOESOURCE, INC.

No. Civ. 00-34-B

March 30, 2004.

Donald J. Perreault, Hayes Soloway Hennessey Grossman & Hage, W. Wright Danenbarger, Wiggin & Nourie, Manchester, NH, for Plaintiff.

James P. Bassett, Orr & Reno PA, Concord, NH, William A. Rudy, Lathrop & Gage LC, Kansas City, MO, for Defendant.

MEMORANDUM AND ORDER

BARBADORO**, Chief J.**

Howard Dananberg claims that Payless Shoe Source, Inc. ("Payless") is currently selling shoes that infringe U.S. Patent No. 4,597,195 (" '195 patent"). In this Memorandum and Order, I construe several disputed terms in Dananberg's patent.

I.

The '195 patent identifies various ways in which a shoe sole or insole can be designed to improve gait. To understand the patent, some background information is necessary.

A. *General Terminology*

A human forefoot consists of phalanges, metatarsals, and sesamoid bones. Phalanges are toe bones. The big toe, called the "great toe" or the hallux, has two phalanges. The phalanx under the nail is the distal phalanx and the other phalanx is the proximal phalanx. The long bones that comprise the majority of the forefoot are metatarsals. They run from the base of the toe up the arch toward the ankle and are numbered one through five. The first metatarsal connects to the great toe. The part of the metatarsal bone closest to the toe is the metatarsal "head." The "metatarsal-phalangeal joint" is the joint between the first metatarsal head and the proximal phalanx of the great toe. Together, the first metatarsal, proximal phalanx, and distal phalanx comprise the first ray. Underneath the metatarsal head lie two sesamoid bones. The one closest to the instep edge of the foot is the medial sesamoid and the one closest to the second metatarsal is the lateral sesamoid. FN1 The dorsal view of the foot is a "top down" view, or what one sees when looking at one's own foot while standing. A plantar view is "bottom up," or looking at the sole of a foot.

FN1. In general, the terms medial and lateral denote proximity to an imaginary "medial" line down the middle of the body. "Medial" indicates relative close proximity to that midline. "Lateral" indicates distance from the line, or relative proximity to outer edges of the body.

Plantarflexion is a movement that occurs during the contraction of the tendon (the peroneus longus) that connects the heel and first metatarsal head. The contracting tendon pulls the first metatarsal head downward and back toward the heel, creating increased foot arch. Flexing the great toe upward plantarflexes the foot. Flexing the foot downward dorsiflexes the foot, or pushes the first metatarsal head in a dorsal direction. Eversion and inversion are rotations of the metatarsal bone medially and laterally, respectively. Generally these motions of the first ray occur during toe-off, which is the last phase of gait before another step begins.

B. *The* '195 Patent

The central idea that underlies the '195 patent is that eversion and plantarflexion of the first metatarsal head can be promoted-and hence gait can be improved-by providing a portion of reduced support in a shoe sole or insole under the first metatarsal head. Only two of the '195 patent's thirteen claims are presently at issue. The first, claim 1, states:

A human shoe sole having a foot supporting upper surface, a portion of said sole, extending from said upper surface into said sole and underlying substantially only the location of the first metatarsal head of a wearer's foot, being of reduced support relative to the remainder of said sole to provide less resistance to downward motion than the remainder of said surface to facilitate eversion and plantarflexion of said metatarsal head, wherein said portion does not extend forward of said first metatarsal head.

The second, claim 10, states:

A human shoe sole to facilitate downward motion of the first metatarsal head, of a human foot supported by said sole, relative to the rest of said foot to promote eversion and plantarflexion of said first metatarsal head, said sole having an upper surface for supporting said foot, a portion of said sole extending downward from said upper surface and underlying said first metatarsal head being of reduced support relative to the remainder, including those portions under the other metatarsal heads and the entire hallux, of the sole.

II.

Claim construction presents a question of law for the court to resolve. Liquid Dynamics Corp. v. Vaughan Co., 355 F.3d 1361, 1367 (Fed.Cir.2004). The starting point is the language of the claim itself. *Id*. "There is a 'heavy presumption' that the terms used in claims 'mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the relevant art." ' Superguide Corp. v. DirecTv Enters., Inc., 358 F.3d 870, 874 (Fed.Cir.2004) (quoting Tex. Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193, 1202 (Fed.Cir.2002). Dictionary definitions are "often useful" in this process. *Id*. at 875. Once a range of possible meanings has been identified, the context in which a disputed term is used in the claims and the specification must be carefully scrutinized to determine the preferred interpretation. *See* Int'l Rectifier Corp. v. IXYS Corp., 2004 WL 528425 (Fed.Cir.2004). While the specification must always be considered, claim terms ordinarily are not limited to the embodiments disclosed in the specification. *See* Amgen Inc. v. Hoechst Marion Roussel, Inc., 314 F.3d 1313, 1328 (Fed.Cir.2003). Extrinsic evidence should be considered only when ambiguity cannot be resolved by consulting the intrinsic evidence. *See SunRace Roots Enter. Co. v. SRM Corp.,* 1336 F.3d 1298, 1307 (Fed.Cir.2003).

A court may depart from ordinary meaning in two circumstances. If the patentee has acted as his own lexicographer by clearly defining the term in the specification, the court must adopt that meaning selected by the patentee. *See* Inverness Med. Switz. GmbH v. Princeton Biomeditech Corp., 309 F.3d 1365, 1371-72 (Fed.Cir.2002). Similarly, a patentee is not entitled to rely on an interpretation that he clearly surrendered during the prosecution of the patent. *See* Superquide Corp., 358 F.3d at 875.

I apply these interpretive standards construing the '195 patent.

III.

Claims 1 and 10 are limited in several ways. The parties disagree as to the meaning of three similar limitations in each claim.

A. "*Relative to the Remainder*"

Claims 1 and 10 each state that a portion of the shoe sole that underlies the first metartasal head and extends from the upper surface of the sole into the sole must be "of reduced support relative to the remainder" of the sole. The parties offer different interpretations for this limitation.

Payless argues that the limitation plainly rules out any shoe sole design in which *any* portion of the shoe sole is of equal or reduced support when compared with the portion of the sole that underlies the first metatarsal head. As Payless sees it, claims 1 and 10 divide the shoe sole into two zones, one being the portion underlying the first metatarsal head and extending from the top of the sole into the sole, and the other being what remains of the sole. Accordingly, Payless argues, when the claims refer to the "remainder" of the sole, they are referring to the entire sole other than the portion that underlies the first metatarsal head.

Dananberg argues that "remainder" refers only to the portion of the sole that is adjacent to the portion that underlies the first metatarsal head. Thus, he argues that a shoe sole design could infringe the '195 patent even though it provides for a second area of reduced support elsewhere on the shoe sole. His argument is that "remainder" must be construed in light of the stated purpose of the claims, which is to promote eversion and plantarflexion. Because the only two portions of the sole that affect eversion and plantarflexion are the portion that underlies the first metatarsal head and the portion adjacent thereto, "remainder" must refer only to the adjacent portion.

I adopt Payless's argument on this issue. In common usage, "remainder" means "something that remains or is left." *The Random House Dictionary of the English Language* 1629 (2d ed.1987). In both claims 1 and 10, what remains of the sole after the portion of the sole underlying the first metatarsal head is excluded is the entire sole other than the excluded portion. Nothing in the claim language, the specification or the prosecution history suggests otherwise and Dananberg has not identified any extrinsic evidence to support his view. While Dananberg may well be correct in claiming that portions of the sole that are unconnected to the portion underlying the first metatarsal head have no impact on eversion or plantarflexion, that fact, if it proves to be true, does not permit me to read into the claim language a meaning that it will not reasonably bear. Accordingly, with respect to claim 1, I construe the limitation at issue to mean the entire shoe sole other than the "portion ... extending from said upper surface into said sole and underlying substantially only the location of the first metatarsal head ... wherein said portion does not extend forward of said metatarsal head." With respect to claim 10, I construe the phrase to mean the entire shoe sole other than the portion of the sole "extending downward from said upper surface and underlying said first metatarsal head...."

B. "*Extending From*"

Claim 1 limits the portion of the sole that is of reduced support to the portion "extending from said upper surface into said sole...." The corresponding language in claim 10 provides that the portion of reduced support is the portion "extending downward from said upper surface...." The parties disagree as to the meaning of these limitations. FN2

FN2. The claims also limit the portion of the shoe sole that must be of reduced support in other ways. For example, claim 1 states that the portion of reduced support must be "underlying substantially only the location of the first metatarsal head ... wherein said portion does not extend forward of said first metartasal head." Claim 10 similarly states that the portion of reduced support must be "underlying said first metatarsal head." These limitations are not currently in dispute.

Payless argues that the limitations encompass only structures that are of reduced support at the upper surface of the shoe sole and extend into the sole. Thus, it argues that the claims are limited to designs that either leave a void in the shoe sole at the upper surface or that have material at the upper surface that is of reduced support relative to the remainder of the sole.

Dananberg contends that the limitations are functional and thus include all structures that produce reduced support at the upper surface of the sole. Under Dananberg's interpretation, a structure that produces reduced support under the first metatarsal head at the surface of the sole by creating a void in the midsole or the underside of the sole would be covered even if the upper surface of the sole is comprised of material of equivalent resistance to the remainder of the sole.

I decline to resolve this dispute because it has not been adequately briefed. Payless focuses on prosecution history that arguably limits the disputed language to avoid prior art FN3 but does not explain why the disputed language is structural rather than functional. Dananberg, in turn, explains why his interpretation is not foreclosed by prior art, but does not otherwise support his position that the language in question is functional. Even if I were to determine that the disputed language is functional, as Dananberg suggests, I would have to determine whether the claims disclose sufficient structure to completely perform the recited function or whether, instead, the claims contain means-plus-function limitations under 35 U.S.C. s. 112 para. 6. *See, e.g., Al-* Site Corp. v. VSI Int'l, Inc., 174 F.3d 1308, 1318 (Fed.Cir.1999). This issue is potentially significant because a means-plus-function claim element is restricted to "corresponding structure, material or acts described in the specification or equivalents thereof," 35 U.S.C. s. 112 para. 6, and the specification does not appear to disclose structures of the type envisioned by Dananberg's interpretation. Thus, it is unclear whether Dananberg could prevail even if I accepted his view that the disputed language is functional. These issues have not been adequately briefed and I decline to resolve them on my own.

FN3. Payless asserts that Dananberg surrendered his right to his proposed interpretation in order to overcome U.S. Patent No. 4,494,321, which was issued to Kevin Lawlor. Lawlor teaches a shock absorbing "inverted cup" structure on the bottom of a shoe sole under the first metatarsal head. The examiner raised Lawlor during an interview with Dananberg on August 21, 1985. Dananberg responded by explaining that his invention did not read on Lawlor because he was claiming a structure of reduced support at the upper surface of the shoe sole extending into the sole, whereas Lawlor claimed a structure that, if anything, increased resistance at that location. After hearing Dananberg's presentation, the examiner "suggested that

[Dananberg's] claims be further amended to distinguish over the art of record by defining the area of reduced support underlying the first metatarsal head as extending from the upper foot supporting surface of the sole and defining this area as being provided to promote downward motion of the first metatarsal head to encourage eversion and plantarflexion thereof." Payless App. Ex. B(8) at 9. Dananberg included the suggested amendment in claim 1 and claim 10 (then claim 22) but did not similarly amend what was then claim 14. As a result, the examiner rejected claim 14 on the ground that it "does not call specifically for the area of reduced support of the sole to extend from the soles [sic] upper surface into the sole...." Payless App. Ex. B(11) at 3.

Payless argues that these excerpts clearly demonstrate that Dananberg surrendered any right to his proposed interpretation during the prosecution history in order to avoid Lawlor. I disagree. The claims as amended do not read on Lawlor regardless of which of the two competing interpretations is adopted. Under Payless's interpretation, Lawlor is distinguished because the portion of reduced support in Lawlor is not at the upper surface of the sole. Under Dananberg's interpretation, Lawlor is distinguished because it does not describe a structure that results in reduced support at the upper surface of the sole.

C. "*Promote or "Facilitate"*

Claims 1 and 10 also contain limitations that both parties treat as functional.FN4 Claim 1 provides that the portion of the sole that is of reduced support must "facilitate eversion and plantarflexion of said metatarsal head...." Claim 10 states that the portion of reduced support must "promote eversion and plantarflexion of the first metatarsal head...." Payless bases two arguments on these limitations. First, it contends that the limitations are means-plus-function claim elements that restrict the claims to the embodiments disclosed in the specification and equivalents thereof. Alternatively, Payless argues that the disputed language limits the claims to designs that promote eversion and plantarflexion to a greater degree than prior art. I examine each argument in turn.

FN4. I accept the parties' position for purposes of analysis.

1. Means-Plus-Function

Under 35 U.S.C. s. 112 para. 6, an inventor may express an element of a claim "as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof...." Id. When a claim element is expressed in such terms, however, the claim is restricted to the "corresponding structure, material, or acts described in the specification and equivalents thereof." Id.

The Federal Circuit has developed an analytical framework for determining whether a claim element is subject to s. 112 para. 6. If the element uses the terms "means" or "step" in combination with a recited function, it is presumed to be a means-plus-function element. *See Al-* Site Corp., 174 F.3d at 1318. Conversely, "treatment as a means-plus-function claim is generally not appropriate" if the claim element does not contain these terms. *Id*. The question ultimately turns on whether the claim element discloses sufficient structure to completely perform the recited function. *Id*. If it recites a function and discloses sufficient structure to entirely perform the recited function, it will not be treated as a means-plus-function claim element regardless of whether it speaks of "means" or "steps" for performing the recited function. *Id*.

Neither of the claims at issue here use the terms "means" or "steps." I am in no position, however, to determine whether the claims recite sufficient structure to completely perform the recited functions until I determine whether the language in claim 1 limiting the portion of reduced support to the portion "extending

from the upper surface into said sole" and the corresponding language in claim 10 limiting the portion of reduced support to the portion "extending downward from said upper surface" are themselves functional or structural limitations. As these subsidiary questions have not been properly briefed, I cannot determine whether to treat the admittedly functional statements at issue here as means-plus-function claim elements. Thus, I also decline to resolve this issue.

2. "*Promote*" *or* "*Facilitate*"

Payless argues that the functional limitations cover only designs that promote plantarflexion and eversion to a greater degree than prior art. I reject this argument because it is based on the flawed premise that the limitations would otherwise be meaningless.

Assuming without deciding that the claim elements at issue disclose sufficient structure to completely perform the recited function of promoting eversion and plantarflexion, the limitations are meaningful to the extent that they serve the recited functions to any degree. I can find nothing in the claims themselves, the specification or the prosecution history that support Payless's argument. Accordingly, I reject its position and instead give the terms in question their ordinary meaning.

CONCLUSION

I grant in part and deny in part Payless's motion for summary judgment on *Markman* interpretation (Doc. No. 77). I deny all other pending motions without prejudice.

The clerk shall schedule a status conference to discuss the next steps in this litigation.

SO ORDERED.

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