NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

HOIST FITNESS SYSTEMS, INC.,
Plaintiff-Appellant

v.

TUFFSTUFF FITNESS INTERNATIONAL, INC.,
Defendant-Appellee

2020-1047

Appeal from the United States District Court for the Central District of California in No. 5:17-cv-01388-AB-KK, Judge Andre Birotte, Jr.

Decided: October 2, 2020

LARA SUE GARNER, Gordon & Rees, San Diego, CA, argued for plaintiff-appellant. Also represented by SEAN DONOVAN FLAHERTY, MATTHEW G. KLEINER, SUSAN B. MEYER.

RUDOLPH A. TELSCHER, JR., Husch Blackwell LLP, St. Louis, MO, argued for defendant-appellee. Also represented by KARA RENEE FUSSNER, DAISY MANNING.

Before LOURIE, SCHALL, and DYK, *Circuit Judges*.

SCHALL, *Circuit Judge*.

Plaintiff-Appellant Hoist Fitness Systems, Inc. ("Hoist") appeals from the September 10, 2019 final judgment of noninfringement entered in the United States District Court for the Central District of California in Hoist's patent infringement suit against Defendant-Appellee TuffStuff Fitness International, Inc. ("TuffStuff"). *Hoist Fitness Sys., Inc., v. TuffStuff Fitness Int'l, Inc.*, Final Judgment, No. 5:17-cv-01388-AB-KK, Dkt. No. 300 (C.D. Cal. Sept. 10, 2019), J.A. 24–25 ("Final Judgment"). Hoist sued TuffStuff for infringement of the following six patents: U.S. Patent No. 7,594,880 ("the 880 patent"); U.S. Patent No. 7,563,209 ("the '209 patent"); U.S. Patent No. 7,549,949 ("the '949 patent"); U.S. Patent No. 7,654,938 ("the '938 patent"); U.S. Patent No. 7,976,440 ("the '440 patent"); and U.S. Patent No. 7,993,251 ("the '251 patent"). Judgment was entered pursuant to the parties' stipulation following the district court's final pronouncement on claim construction at a pretrial status conference held on September 9, 2019. Joint Stipulation for Entry of Judgment, No. 5:17-cv-01388-AB-KK, Dkt. No. 298 (C.D. Cal. Sept. 10, 2019), J.A. 26–29 ("Joint Stipulation"). Because we discern no error in the district court's claim construction, we affirm.

BACKGROUND

I.

Hoist's patents are directed to "exercise machine[s] with a pivoting user support." '938 patent col. 1 ll. 15–17. The patents state that the "user support frame moves in conjunction with the exercise arm" so the user experiences a "more natural feeling exercise movement that more closely replicates the movement found in the corresponding free weight exercise." *Id.* at col. 4 ll. 11–16. The patents describe and illustrate two general kinds of mechanisms that may be used to pivotally mount a user support frame

onto an exercise machine's main frame to achieve this objective: (1) a single pivot;[1] or (2) a "four-bar linkage," which is a multiple part pivot assembly having multiple pivots.[2] Such four-bar linkage mechanisms have a "theoretical" pivot axis that is a point reflecting a composite center of rotation for the user support frame. *See* '938 patent col. 6 ll. 6–17; '209 patent col. 6 ll. 42–50. As explained in the '938 patent:

> The multiple part pivot assembly defines a theoretical pivot axis of the user support pivotal motion. As illustrated in FIGS. 3 and 4, the theoretical pivot axis 84 is located below the user support, and a theoretical gravitational center line 74 of the pivotal motion extending through pivot axis 84 also extends through the user support frame 15. The location of the theoretical pivot axis 84 can be determined from the start and end positions of the two pivot links 60 and 62, and is the point of intersection of the centerline A of the pivotal movement of the forward link 62 and the centerline B of the pivotal movement of the rear link 60, as indicated in FIGS. 3 and 4.

'938 patent col. 6 ll. 6–17. For purposes of addressing the claim construction issues presented in this appeal, we consider claim 22 of the '880 patent and claim 1 of the '938 patent representative of the relevant claims of the six Hoist patents at issue. Claim 22 of the '880 patent recites:

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[1] *See, e.g.*, '880 patent col. 10 l. 51–col. 22 l. 63 & Figs. 5–32; '949 patent col. 3 l. 13–col. 7 l. 11 & Figs. 1–6.

[2] *See, e.g.*, '938 patent col. 5 l. 63–col. 6 l. 17 & Figs. 1–4; '949 patent col. 7 l. 12–col. 8 l. 26 & Figs. 7A–8.

22. An exercise machine, comprising:

a main frame;

a user support frame pivotally mounted relative to the main frame for rotation about a user support pivot axis, the user support pivot axis defining a vertical, gravitational center line, the user support frame comprising one moving part of the machine;

the user support frame having at least a primary support and a secondary support for supporting spaced positions on a user's body throughout an exercise movement, the primary support comprising a seat pad and the secondary support comprises a leg support which travels in the same direction as the primary support throughout an exercise movement;

a user engagement device movably mounted on one of the frames for engagement by the user in performing exercises, the user engagement device comprising a second moving part of the machine;

a connecting link linking movement of the user engagement device to movement of the user support frame, the connecting link comprising a third moving part of the machine; and

a load for resisting movement of at least one of the moving parts of the machine; whereby movement of the user engagement device in an exercise movement simultaneously moves the user support frame between a start position and an end position, the user support pivot axis being positioned such that portions of the combined weight of the user and user support frame are distributed on each side of the gravitational center line of the user support pivot axis in both the start and end position and only a portion of the combined weight passes

> through the gravitational center line during the exercise movement.

'880 patent col. 28 l. 44–col. 29 l. 14. Claim 1 of the '938 patent recites:

> 1. An exercise machine, comprising:
>
> a stationary main frame having an upper end, a lower end, a first end, and a second end;
>
> a user support frame which is adapted to support a user in an exercise ready position on the main frame;
>
> a multiple part pivot assembly pivotally mounting the user support frame relative to the main frame and having multiple pivots which together control pivotal movement of the user support frame in an arcuate exercise movement path about a central pivot axis;
>
> the user support frame having at least a primary support and a secondary support which support spaced positions on a user's body throughout an exercise movement, the secondary support being secured at a fixed and unchanging angular orientation relative to the primary support at least throughout an exercise movement, the primary support supporting the majority of a user's weight in the start position of the support frame;
>
> a user engagement device movably mounted relative to the frames for engagement by the user in performing exercises;
>
> a connecting linkage which translates movement of the user engagement device during an exercise to movement of the user support frame;

> a load for resisting movement of at least one of the user support, user engagement device, and connecting linkage; and
>
> the central pivot axis of the pivotal movement of the user support frame being positioned such that a gravitational center line which extends vertically through the central pivot axis also extends through the user support frame during at least part of the arcuate exercise movement path of the user support frame and only a portion of the combined weight of the user and user support frame passes through the gravitational center line during an exercise.

'938 patent col. 9 l. 56–col. 10 l. 25.

II.

On April 3, 2017, Hoist sued TuffStuff in the Southern District of California, alleging infringement of claim 22 of the '880 patent; claims 6 and 21 of the '209 patent; claims 2, 8, and 23 of the '949 patent; claims 1, 12, and 13 of the '938 patent; claims 5, 12, 13, and 20 of the '440 patent; and claims 54 and 71 of the '251 patent. Compl., No. 3:17-cv-00670, Dkt. No. 1 (S.D. Cal. Apr. 3, 2017) at 6–11, J.A. 330–35. The case was subsequently transferred to the Central District of California.

The exercise devices which Hoist accused of infringement are part of TuffStuff's "Bio-Arc" line of products. The TuffStuff devices have a user support that is mounted on a pivot that is, in turn, mounted on a sliding carriage that translates back and forth along a linear shaft during the exercise movement. Def.'s Not. of Mot. and Mot. for Summ. J, Ex. 17, Decl. of D. Penado, No. 5:17-cv-01388-AB-KK, Dkt. No. 144-17 (C. D. Cal. Dec. 26, 2018) at 2–16, J.A. 3773–87. The accused TuffStuff devices have structure that both pivots and slides, resulting in a "combined elliptical movement." Pl.'s Notice of Mot. and Mot. for Prelim.

Inj. to Enjoin Infringement of the '880 Patent, No. 5:17-cv-01388-AB-KK, Dkt. No. 33 (C.D. Cal. Sept. 5, 2017) at 16–17, J.A. 481–82.

III.

In the course of the proceedings below, the district court construed a number of claim terms. The joint stipulation for entry of judgment of noninfringement, however, was based upon the court's construction of just three terms: "pivotally mounted relative to the main frame," "pivotally mounting the user support frame relative to the main frame," and "pivotally mounted on the main frame." Joint Stipulation at 2, J.A. 27. Accordingly, it is to these related terms that we direct our attention. The term "pivotally mounted relative to the main frame" appears in independent claim 22 of the '880 patent in the limitation "a user support frame pivotally mounted relative to the main frame for rotation about a user support pivot axis, the user support pivot axis defining a vertical, gravitational center line." '880 patent col. 28 ll. 47–50.[3] The term "pivotally mounting the user support frame relative to the main frame" appears in independent claim 1 and, through their dependency on claim 1, claims 12 and 13 of the '938 patent, in the limitation "a multiple part pivot assembly pivotally mounting the user support frame relative to the main frame and having multiple pivots which together control pivotal movement of the user support frame in an arcuate exercise movement path about a central pivot axis." '938 patent col. 9 ll. 61–

[3] The term "pivotally mounted relative to the main frame" also appears in independent claims 6 and 21 of the '209 patent, independent claims 2, 8, and 23 of the '949 patent, and independent claims 5 and 20 of the '440 patent. *See* '209 patent col. 15 ll. 31, 54–57 & col. 16 l. 66; '949 patent col. 12 ll. 14 & 63, col. 13 ll. 29 & 42–43, col. 15 l. 19; '440 patent col. 11 ll. 47–48 & col. 14 ll. 51–52.

65 & col. 11 ll. 7–12.[4] The term "pivotally mounted on the main frame" appears in independent claims 54 and 71 of the '251 patent in the limitation "a user support frame pivotally mounted on the main frame which supports a user in an exercise position." '251 patent col. 21 ll. 28–29, col. 22 ll. 62–63. Where appropriate, we refer to these as the "pivotally mounted/mounting terms."

In a claim construction order issued on October 24, 2018, the district court determined that no construction was necessary for the pivotally mounted/mounting terms. Claim Construction Order, No. 5:17-cv-01388-AB-KK, Dkt. No. 111 (C.D. Cal. Oct. 24, 2018) at 15, J.A. 44. The court observed, though, that construing "pivot" and "rotation" to include "more than generally 'concentric' movement would effectively destroy the meaning of those terms as they were understood by the patent applicant." *Id.* at 14, J.A. 43.

On August 27, 2019, two weeks before the date scheduled for trial, the district court addressed claim construction again, when it ruled on the parties' respective motions *in limine*. *See* Order Regarding Parties' Mots. *in Lim.* and Construing Additional Disputed Claim Terms, No. 5:17-cv-01388–AB-KK, Dkt. No. 279 (C.D. Cal. Aug. 27, 2019) ("August 27, 2019 Order"), J.A. 95. The court (1) construed "pivotally mount[ed]/[ing] relative to the main frame" as "mount[ed]/[ing] such that the overall movement relative to the main frame is generally concentric; provided, however, that movement need not be perfectly circular;" (2) construed "pivotally mounted on the main frame" as "mounted, either directly or indirectly, to the main frame such that the overall movement relative to the main frame is generally concentric; provided, however, that movement

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[4] The term "pivotally mounting the user support frame relative to the main frame" also appears in independent claims 12 and 13 of the '440 patent. '440 patent col. 13, ll. 13–14 & 54–55.

need not be perfectly circular;" and (3) construed "arcuate exercise movement path about a central pivot" as an "overall movement path that is generally concentric about a single central pivot point; provided, however, that movement need not be perfectly circular around the central pivot point." *Id.* at 7, J.A. 101. In its order, the court stated that it would permit Hoist's expert, Steven M. Lenz, to serve a supplemental report responding to its claim construction. *Id.* at 8, J.A. 102. Hoist served its expert's supplemental report on September 6, 2019. J.A. 9340.

On September 9, 2019, the day before trial was scheduled to begin, the court held a status conference. At the conference, the court provided further guidance regarding construction of the pivotally mounted/mounting terms, in light of its view that "concentric is more synonymous with circular" as opposed to "hav[ing] a common center or to be aligned." J.A 9439–40. The court stated:

> All right. I have considered the argument of both counsel in the case. Look, the Court—I guess I take the view that the supplemental expert report has just interpreted the term "concentric" too broadly. The plaintiffs—I guess, if I understand Lenz's report correctly, concentric means to have a common center or to be aligned, just looking at the report again. Defense believes concentric is more synonymous with circular. Quite frankly, the Court agrees with the defense on this one based on the Court's orders and the patents themselves.
>
> When you look at the claim language, it requires pivotal movement, and the claim term we have been construing here is "pivotally mounted." I think the ordinary meaning of a pivot is a fixed point with movement around that point. And so, by construing the term to include generally concentric movement, we were trying to clarify that the patents that described this four-bar linkage

> assembly embodiment would not require a perfectly circular motion. But I think the plaintiff's interpretation as concentric is something much broader than circular goes beyond these examples and I think beyond the meaning of pivot.

Id.

The effect of this pronouncement was to leave the parties with a claim construction that combined what the court had said in its claim construction order of October 24, 2018, and at the September 9 status conference. Accordingly, the pivotally mounted/mounting terms were effectively construed to mean:

> mount[ed]/[ing] such that the overall movement relative to the main frame is generally concentric ["concentric" is "more synonymous with circular" rather than meaning "having a common center"]; provided, however, that movement need not be perfectly circular.[5]

In view of its claim construction, the district court struck the supplemental report of Hoist's expert.[6]

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[5] Similarly, the term "pivotally mounted on the main frame" was effectively construed to mean:

> mounted, either directly or indirectly, to the main frame such that the overall movement relative to the main frame is generally concentric ["concentric" is "more synonymous with circular" rather than meaning "having a common center"]; provided, however, that movement need not be perfectly circular.

[6] In his supplemental report, Hoist's expert Mr. Lenz stated that a person of ordinary skill in the art "would understand "concentric" as "having a common center,"

On September 10, based upon the claim construction advanced by the district court at the September 9 status conference, the parties stipulated to entry of judgment of noninfringement in favor of TuffStuff. That same day, the court entered final judgment in accordance with the stipulation. Thereafter, Hoist timely appealed. We have jurisdiction pursuant to 28 U.S.C § 1295(a)(1).

DISCUSSION

I.

Claim construction is ultimately an issue of law that we review *de novo*. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 325–26 (2015). "[W]hen the district court reviews only evidence intrinsic to the patent (the patent claims and specifications, along with the patent's prosecution history), the judge's determination will amount solely to a determination of law, and the Court of Appeals will review that construction *de novo*." *Id.* at 331. We review

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"regardless of the object or shape to which the common center regards." J.A. 9344. Mr. Lenz stated:

> In other words, two bodies of dissimilar or non-symmetrical shapes or sizes may nonetheless be aligned in a concentric manner.
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> For example, a square and a triangle are concentrically aligned if they have a common center. Similarly, the overall rotational motion of a body is "concentric" arounds its center of rotation, or pole of planar displacement, despite the fact that not all points on said body need rotate precisely around the same center of rotation. Rather, when considering the rotation of the body as a whole, the center of rotation [is] an average point around which the body moves.

J.A. 9344.

the district court's underlying factual findings for clear error. *Id.* at 325–33.

Claim terms are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art. *Phillips v. AWH Corp.,* 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (*en banc*). The person of ordinary skill in the art is "deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Id.* at 1313.

II.

Hoist argues that the district court erred when it construed the pivotally mounted/mounting terms to require "overall movement" that is "generally concentric" and in concluding that "concentric" is "more synonymous with circular" rather than meaning "having a common center." Appellant's Br. 38.[7] In so doing, Hoist contends, the district

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[7] We have considered and find no merit to TuffStuff's argument that Hoist withdrew from the litigation its allegations of infringement with respect to certain patents and claims prior to, and unrelated to, the stipulation. Hoist did not officially "withdraw" its patents or claims, but merely selected "representative" claims to present to the jury upon the court's request that it do so. J.A. 9273–74. Indeed, all of the patents and claims at issue were included in the parties' joint proposed pre-trial conference order. Proposed Final Pre-Trial Conf. Order, No. 5:17-cv-01388-AB-KK, Dkt. No. 239, at 5 (C.D. Cal. Sept. 2, 2019). Further, the parties' stipulation for entry of final judgment specifically identified each of the six Hoist patents at issue as having been asserted. Joint Stipulation at 2, J.A. 27. Hoist thus did not cease to litigate the patents or claims at issue, and they are all properly before us on appeal. *See Alcon Rsch. Ltd. v. Barr Labs., Inc.*, 745 F.3d 1180, 1193 (Fed. Cir. 2014)

court "improperly imported additional movement path restrictions" into its constructions of the pivotally mounted/mounting terms. *Id.* at 42. Hoist asserts that, while claims that recite a pivot axis do require "generally concentric" movement about the pivot axis,[8] claims directed to pivotally mounted/mounting have no requirement of concentricity. *Id.* at 44–45. Finally, Hoist argues that the court's claim construction improperly limits movement of the user support to the movement disclosed in the case of the single pivot embodiment. Hoist states that "[i]f an embodiment's user support were mounted using one physical pivot *and if* that single pivot were fixed in place, the movement of the user support would be only circular." *Id.* at 46. Hoist continues, however, that "[t]he Asserted Claims are not so limited." *Id.* Hoist concludes its argument by summarizing that:

> The "pivotally mounted[/ing]" terms have no special meaning beyond their plain meaning. The specification and claim language make[ ] clear that the claims merely require a pivotal mounting relative to or on the main frame, which is the plain meaning. The term makes no further reference to, and places no further limitation on, the shape or nature of the resulting movement path.

Id. at 48.

TuffStuff responds that the district court correctly construed the pivotally mounted/mounting terms. It states that the district court properly construed "pivotally mounted/mounting relative to the main frame" as

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(citing *SanDisk Corp. v. Kingston Tech. Co.*, 695 F.3d 1348, 1353 (Fed. Cir. 2012)).

[8] *E.g.*, claim 22 of the '880 patent, claim 6 of the '209 patent, claims 2, 8, and 23 of the '949 patent, and claim 1 and its dependent claims 12 and 13 of the '938 patent.

requiring "pivotal motion" (i.e., generally concentric/circular motion) in relationship to the main frame. Appellee's Br. 47. TuffStuff argues that the patent specifications, the "single best guide" to claim construction under *Phillips*, 415 F.3d at 1315, "overwhelmingly" support the proposition that a mounting structure that produces "pivotal" motion is one that produces a circular motion around a fixed point. Appellee's Br. 47, 50–51. In advancing that argument, TuffStuff points to several places in the '209 and '949 patent specifications where it is stated that the four-bar pivot linkage "duplicates" the movement of a single pivot. *Id.* at 8–10 & 48–50.

III.

We find no error in the district court's claim construction. As noted above, claim terms are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art, who is "deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Phillips*, 415 F.3d at 1313. Here, the specifications compel a construction of "pivotally moun[ed]/[ing]" that requires generally concentric motion, where concentric is "more synonymous with circular" than "having a common center."

Hoist does not dispute that a single, fixed, physical pivot accomplishes "generally circular" movement. *See* Appellant's Br. 46. Indeed, Hoist's expert, Mr. Lenz, confirmed that a single pivot mounted on a stationary base would move in "essentially" a "circular motion" around its pivot axis. J.A. 2618. Instead, however, Hoist points to the four-bar linkage as an embodiment that it claims illustrates movement that is *not* generally circular and instead "always includes a lateral component in addition to a pivotal component." Oral Arg. at 4:19–5:05 (July 6, 2020), available at http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2020-1047.mp3.

We do not read the specifications to encompass lateral movement in the manner Hoist argues. Rather, the specifications for the Hoist patents repeatedly state that the four-bar linkage system "duplicates" the movement pattern of a single point pivot, while providing additional location options for the theoretical pivot axis of the four-bar linkage that are not possible with a single point pivot. Specifically, the specification of the '209 patent states:

> The advantage of the four-bar pivot system with the theoretical pivot is that it *duplicates the movement pattern of a single point pivot* that might normally be located in an area impossible to access due to either structural or user interference, so that a desired movement pattern may be achieved while keeping the moving parts of the pivot mount beneath the user support.

'209 patent col. 6 ll. 42–48 (emphasis added); *see also id.* at col. 7 ll. 7–11 ("[T]he four-bar pivoting linkage system . . . *duplicates the movement pattern of a single point pivot* that would otherwise be located underground, beneath the machine.") (emphasis added); col. 13 ll. 56–62 (explaining that a four-bar pivoting linkage system "can allow a desired pivoting movement to be achieved when a single pivot point for producing the *same motion* may be located in an area impossible to access due to either structural or user interference.") (emphasis added).

The '949 patent similarly states that a four-bar linkage recreates the movement of a single pivot when a pivot cannot be placed at the desirable location:

> A four bar pivot linkage beneath the user support can be arranged to produce *movement equivalent to a single pivot* at an inaccessible location . . . .

'949 patent col. 2 ll. 10–15 (emphasis added).

> The theoretical pivot . . . is the position the user support would pivot about *if a single pivot were used in order to obtain the same movement pattern*.

Id. at col. 8 ll. 6–9 (emphasis added). The '251 patent incorporates by reference the patent application that ultimately issued as the '949 patent and, in addition, uses the terms "concentric" and "circular" synonymously. '251 patent col. 1 ll. 53–55 ("Since the exercise arms had only one pivot, they could only move in a concentric or circular pattern.").

Further, like the '209 patent and the '949 patent, the '880 patent, the '938 patent, and the '440 patent each describe a theoretical pivot axis for the four-bar linkage that is stationary, thereby resulting in generally concentric motion. *E.g.*, '880 patent col 9 l. 62–col. 10 l.1 & Figs. 1–4, '938 patent col. 6 ll. 6–17, col. 7 ll. 55–57 & Figs. 1–4, '440 patent col. 9 ll. 52–55.

We note that, to the extent the movement of a four-bar linkage is not identical to a single pivot, the district court addressed this through its construction that the movement need be "generally" concentric but need not be "perfectly circular." *See* J.A. 9439–40; August 27, 2019 Order at 7, J.A. 101. At the same time, though, the Hoist specifications do not support a construction that goes beyond generally concentric, or generally circular, motion.

Based upon the foregoing, we hold that the district court did not err in it claim construction.[9]

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[9] Additionally, we find no error in the district court's decision to strike Mr. Lenz's supplemental report. The court struck the supplemental report in part because it determined that Mr. Lenz interpreted the term "concentric" too broadly. As we have affirmed the district court's claim

CONCLUSION

Because we agree with the district court's construction of the pivotally mounted/mounting claim terms, we affirm the judgment of noninfringement of the Hoist patents in favor of TuffStuff.

AFFIRMED

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construction, for the reasons discussed above, we also agree that the report was properly stricken.