

NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

2009-1170

SRAM CORPORATION (now known as SRAM, LLC),

Plaintiff-Appellee,

v.

AD-II ENGINEERING, INC.,

Defendant-Appellant.

Richard B. Walsh, Jr., Lewis, Rice & Fingersh, L.C., of St. Louis, Missouri, argued for plaintiff-appellee.

Michael T. Brady, Miller & Chevalier Chartered, of Washington, DC, argued for defendant-appellant.

Appealed from: United States District Court for the Northern District of Illinois

Judge Robert W. Gettleman

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AD-II ENGINEERING, INC.,

Defendant-Appellant.

Appeal from the United States District Court for the Northern District of Illinois in consolidated cases nos. 00-CV-6675 and 01-CV-62, Judge Robert W. Gettleman.

DECIDED: February 26, 2010

Before RADER, BRYSON, and LINN, Circuit Judges.

LINN, Circuit Judge.

In the judicial equivalent of the Tour de France, this bicycle gear shifter patent infringement case returns to us for the third time in what will now be its final stage. Here, AD-II Engineering, Inc. (“AD-II”) appeals an order of the United States District Court for the Northern District of Illinois entering summary judgment of liability in favor of SRAM Corporation (“SRAM”) based on the court’s finding that claims 16 and 27 of SRAM’s U.S. Patent No. 4,900,291 (the “291 Patent”) were not invalid and were infringed by AD-II. Because we conclude that claims 16 and 27 are anticipated as a matter of law, we reverse.

BACKGROUND

A. The '291 Patent

The '291 Patent relates to bicycle gear-shifting systems for multi-speed bicycles. These systems generally include a shift actuator (also known as a “shifter”) that is connected by a control cable to a derailleur that moves a bicycle chain from one sprocket or chain wheel to another. Bicycle gear-shifting systems suffer from “play” caused by looseness or yielding of system parts. SRAM Corp. v. AD-II Eng'g, Inc., 465 F.3d 1351, 1353 (Fed. Cir. 2006) (“SRAM II”). This play (referred to as “cumulative lost motion”) must be eliminated before a gear-shifting system can shift gears. Id. A common method of removing cumulative lost motion is “overshifting,” i.e., first moving a shift actuator “briefly beyond a destination position to take up all of the collective slack in the system and move the drive chain slightly beyond the destination sprocket” and then “bringing the shift actuator back to its destination position and allowing the drive chain to move back into alignment with the destination sprocket.” Id. Overshifting is particularly desirable when “downshifting,” that is, moving the bicycle drive chain from a smaller chain wheel or sprocket to a larger chain wheel or sprocket. '291 Patent col.1 ll.55-57, col.9 ll.12-14, 19-21. Prior art gear-shifting systems required the rider to move the shift actuator in the manner described above, which took considerable skill, as the rider had to determine not only the desired amount of overshift but also the duration of the overshift. Id. col.1 ll.62-66.

The '291 Patent discloses detent-based rotatable shift actuators that overcome these drawbacks by providing built-in overshift. The disclosed shifters eliminate the need for a rider to manually overshift a bicycle chain to remove cumulative lost motion

as the optimum amount of overshift is “programmed” into each shifter. *Id.* col.6 ll.14-20. This feature has been referred to throughout this litigation as “precision indexed downshifting.” *SRAM II*, 465 F.3d at 1354. Using precision indexed downshifting, a rider “need only move from one index position to the next to effect a positive shift independent of the cumulative lost motion present in the system.” *Id.*

SRAM asserts that AD-II has infringed claims 16 and 27 of the '291 Patent.

Claim 16 recites a method of shifting and reads as follows:

16. In a bicycle derailleur gear shifting system having a rear derailleur shifting mechanism, a shift actuator *rotatably mounted on a bicycle handlebar generally coaxially of the handlebar, said shift actuator being mounted on and engaged over an outside of the handlebar inboard of a fixed handgrip on an end of the handlebar*, and control cable means operatively connecting said actuator to said shifting mechanism, a method of performing down-shifting events from a relatively smaller origin freewheel sprocket to a relatively larger destination freewheel sprocket, which comprises:

first [moving] *rotating* said shift actuator a sufficient amount to take up substantially all of the cumulative lost motion in said derailleur mechanism and said cable means; and

then [moving] *rotating* said shift actuator a further amount [to] so as to move the bicycle chain at least substantially the distance between the centers of said origin and destination sprockets.

'291 Patent Reexamination Certificate col.4 l.66-col.5 l.17 (issued Apr. 25, 2000) (brackets indicate text deleted through amendment; italics indicate text added through amendment). Claim 27, which depends from claim 16, adds the limitation “operating said shift actuator to perform a series of indexed downshifts”:

27. *A method as set forth in claim 16 further comprising operating said shift actuator to perform a series of indexed downshifts in each of which the chain of the derailleur mechanism is shifted from a relatively smaller*

origin [sic] freewheel sprocket to a relatively larger destination freewheel sprocket, said method comprising for each downshift in said series:

first rotating the shift actuator a sufficient distance to take up substantially all of the cumulative lost motion in said derailleur mechanism and said cable means; and

then rotating said shift actuator a further amount so as to move the bicycle chain at least substantially the distance between the centers of said origin [sic] and destination sprockets.

Id. col.7 l.3-col.8 l.7.

B. Procedural History

In SRAM II, we construed claim 16 and concluded that neither step in that two-step method claim recites “precision indexed downshifting.” Indeed, we observed that claim 16 does not recite indexing at all. We made clear that “[c]laim 16 only recites a method of shifting wherein first, all of the cumulative lost motion is taken up and second, the bicycle chain moves between destination freewheel sprockets. All claim 16 requires is a method that takes up lost motion in a bicycle shifting mechanism and then moves the derailleur of that mechanism from one sprocket to another. Claim 16 does not recite that lost motion is taken up by a manual overshift and backshift motion or by an index shift actuator causing a built-in overshift and precise downshift between defined index positions (e.g., by ‘precision indexed downshifting’).” SRAM II, 465 F.3d at 1358. At bottom, we held that “the claim covers no more than the recited method of taking up lost motion and effecting a shift.” Id. at 1359. We then remanded the case to the district court.

Following that remand, AD-II moved for summary judgment of invalidity of claim 16, arguing that U.S. Patent No. 4,260,171 issued to Edwin Foster (the “Foster reference”) and Japanese Unexamined Patent Application No. 58-191682 (the

“Japanese reference”) each anticipate the claim. SRAM moved for summary judgment of infringement of claim 27.

The district court denied both parties’ motions. As for the invalidity of claim 16, the court found that neither the Foster reference nor the Japanese reference addresses taking up cumulative lost motion and that AD-II had failed to show that the problem of taking up cumulative lost motion is inherent to all derailleur systems. SRAM Corp. v. AD-II Eng’g, Inc., No. 00-CV-6675, slip op. at 1-2 (N.D. Ill. Aug. 2, 2007). The district court also concluded that summary judgment of infringement of claim 27 was inappropriate because the parties disputed whether AD-II’s shifters perform indexed downshifts. Id. at 2-3. The district court then ordered the parties to submit additional briefing addressing whether the court should grant summary judgment of infringement of claim 16 in favor of SRAM. Id. at 3.

As part of its briefing, AD-II submitted an affidavit from Eric Mu, manager of research and development at AD-II. Mu declared that for a rider to downshift a bicycle using an AD-II shifter, the rider must first rotate the shifter to an overshift position and then rotate the shifter back to its normal position. After reviewing this affidavit and the parties’ submissions, the court ordered an in-court demonstration of both SRAM’s and AD-II’s shifters. According to the court, the demonstration proved that a rider can downshift a bicycle by rotating an AD-II shifter in only one direction, despite Mu’s affidavit stating the contrary.

The district court subsequently entered an amended order granting SRAM summary judgment of infringement of claim 16. The district court found that “[c]laim 16 indicates in express language that cumulative lost motion must be taken up by rotating

the shift actuator in one direction with the shift being effected by further rotation in the same direction.” SRAM Corp. v. AD-II Eng’g, Inc., No. 00-CV-6675, slip op. at 5 (N.D. Ill. filed June 24, 2008). Because the in-court demonstration established that a rider could perform the recited method steps by rotating an AD-II shifter in one direction, the court found that AD-II’s shifters infringed claim 16. Id. at 4-5.

The district court then granted SRAM’s motion for summary judgment of infringement of claim 27 and denied AD-II’s countermotion for summary judgment of invalidity of claims 16 and 27. SRAM Corp. v. AD-II Eng’g, Inc., No. 00-CV-6675 (N.D. Ill. Sept. 29, 2008) The court entered final summary judgment of liability in favor of SRAM on December 16, 2008, SRAM Corp. v. AD-II Eng’g, Inc., No. 00-CV-6675 (N.D. Ill. Dec. 16, 2008), and AD-II filed a timely appeal. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1) (2006).

On appeal, AD-II argues that the district court erroneously concluded that the Japanese reference does not anticipate claims 16 and 27. Because we agree that the claims are anticipated by the Japanese reference, we do not address the other issues raised by AD-II.

DISCUSSION

A. Standards of Review

We review a district court’s grant of summary judgment de novo. Revolution Eyewear, Inc. v. Aspex Eyewear, Inc., 563 F.3d 1358, 1365 (Fed. Cir. 2009). Summary judgment is appropriate when there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(c). When determining whether a genuine issue of material fact exists, we view the evidence in the

light most favorable to the nonmoving party and resolve all doubts in its favor. Eli Lilly & Co. v. Barr Labs., Inc., 251 F.3d 955, 962-63 (Fed. Cir. 2001). Although anticipation is a question of fact, we may decide it on summary judgment if there is no genuine dispute of material fact. Leggett & Platt, Inc. v. VUTEK, Inc., 537 F.3d 1349, 1352 (Fed. Cir. 2008).

B. Anticipation

The Japanese reference relates to gear-shifting mechanisms for bicycles. As described in an English translation of the reference, these mechanisms include “a gear ratio switching unit; for example, a unit comprised of a multi-speed planetary gear . . . a chain shifter for shifting the drive chain to each of these gears . . . [and] an operating apparatus and coupling members for coupling this to the gear ratio switching unit.” J.A. 4571. These gear-shifters “allow the rider to shift the gear ratio by gripping and rotating the operating member during operation.” Id. The reference discloses arranging “the operating member . . . in its standard axial orientation at a location on the mounting unit far from the end of the handlebar axially when the mounting unit is mounted on the end section of the handlebar.” Id. 4572. “As a result, the rider’s hand can grip the handlebar part between the end of the handlebar and the operating member axially.” Id.

According to AD-II, SRAM has conceded that the Japanese reference discloses all of the structural details recited in claim 16. AD-II contends that the reference inherently discloses the method limitations, as the undisputed evidence shows that all rotary gear shifters must perform the claimed method to shift gears. AD-II also contends that the Japanese reference discloses the limitation added by claim 27.

SRAM disagrees that the Japanese reference anticipates claims 16 and 27. SRAM contends that the Japanese reference does not mention the problem of cumulative lost motion, much less offer a solution for it. SRAM also contends that AD-II's claim that all rotary gear shifters perform the method steps of claim 16 is belied by AD-II's argument that AD-II's shifters do not take up cumulative lost motion. Regarding claim 27, SRAM argues that AD-II has presented no evidence to support AD-II's anticipation contentions. According to SRAM, AD-II relies solely on the unsupported arguments of AD-II's counsel.

As SRAM clarified at oral argument, SRAM also argues that the Japanese reference is not enabling and therefore cannot anticipate the asserted claims. During a reexamination of the '291 Patent, SRAM submitted to the United States Patent and Trademark Office ("Office") a declaration from the inventor of the Japanese reference stating that he never made a functional model of the invention that worked with a derailleur and, to his knowledge, such a device was never made. SRAM also claims that during the reexamination it demonstrated to the Office that a model of the device described in the Japanese reference could not perform the method recited in claim 16. SRAM believes that this demonstration and the inventor's declaration prove that the Japanese reference is inoperable and therefore not enabling.

For a prior art reference to anticipate a patent, it must disclose each and every limitation of the claimed invention. Schering Corp. v. Geneva Pharms., Inc., 339 F.3d 1373, 1377 (Fed. Cir. 2003). "[A] prior art reference may anticipate without disclosing a feature of the claimed invention if that missing characteristic is necessarily present, or inherent, in the single anticipating reference." Id. However, a patent claim "cannot be

anticipated by a prior art reference if the allegedly anticipatory disclosures cited as prior art are not enabled.” Elan Pharms., Inc. v. Mayo Found. for Med. Educ. & Research, 346 F.3d 1051, 1054 (Fed. Cir. 2003). “The standard for what constitutes proper enablement of a prior art reference for purposes of anticipation under section 102, however, differs from the enablement standard under section 112.” Rasmusson v. SmithKline Beecham Corp., 413 F.3d 1318, 1325 (Fed. Cir. 2005). It is well-settled that utility or efficacy need not be demonstrated for a reference to serve as anticipatory prior art under section 102. See In re Schoenwald, 964 F.2d 1122, 1124 (Fed. Cir. 1992); Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc., 246 F.3d 1368 (Fed. Cir. 2001).

We begin our anticipation analysis with claim 16. We agree with AD-II that the Japanese reference discloses every limitation recited in this claim even under the construction of the claim adopted by the district court. SRAM does not dispute that the Japanese reference discloses the structural details recited in claim 16, and there is no genuine issue of material fact that the device disclosed in the Japanese reference must perform the method steps of claim 16 to shift gears as described in the reference. Although the district court held that claim 16 required rotation in the same direction to take up cumulative lost motion and effect a shift, that does not provide a basis to distinguish the Japanese reference.

SRAM’s expert acknowledged that a shifter built according to the disclosure of the Japanese reference would “effect a shift.” J.A. 2921. And both parties’ experts stated that a gear shifting system must remove cumulative lost motion before shifting gears. See id. 2526.080 (“That’s just shifting 101. That’s how you shift a bike. Unless you perform [the method steps of claim 16], there is no shifting.”); id. 2526.086 (“[I]t

would be fair to say that lost motion must be first taken up before there is any motion of the derailleur system.”). Although SRAM’s expert declared that “[o]ne of ordinary skill in the art would not find inherent in JP ’682 a solution to the problem of cumulative lost motion,” id. 3585, he admitted that cumulative lost motion would have been present in the gear shifting device described by the Japanese reference and that the device would have removed the lost motion:

While cumulative lost motion would have been present in any device constructed in accordance with the disclosure of Foster ’171 or JP ’682 and in order for such a device to shift gears it would have had to remove the lost motion, there is absolutely no recognition of the problem in either of these references, no attempt to solve the problem, and no suggestion of a method for compensating for cumulative lost motion in either reference. Though prior art shifters such as Foster ’171 and JP ’682 may have compensated for cumulative lost motion, they did so in a clumsy and imprecise way

Id. 2922. SRAM argues that this statement merely shows that the Japanese reference might shift gears, presumably because SRAM’s expert stated that the Japanese reference “may have compensated for cumulative lost motion.” However, when considered in context, the statement is a clear admission that the device described in the Japanese reference suffered from lost motion and would have necessarily removed any cumulative lost motion before shifting gears.

SRAM’s remaining arguments regarding inherency are equally unpersuasive. It is irrelevant that the Japanese reference may not have recognized the problem of cumulative lost motion or explicitly suggested a solution for it. See Schering Corp., 339 F.3d at 1377 (rejecting the contention that inherent anticipation requires recognition in the prior art). Nor is it relevant that AD-II argued that its shifters do not perform the recited method. What is relevant is that the Japanese reference describes shifting

gears by rotating a shifter (i.e., the operating member). Here, there is no genuine issue of material fact that the rotation of the shifter in the Japanese reference necessarily results in the removal of cumulative lost motion before a shift is accomplished. Because we previously determined that claim 16 does not recite precision indexed downshifting, this is all that is needed to anticipate the claim.

We also agree with AD-II that the Japanese reference discloses each limitation of claim 27. Claim 27 adds the limitation “operating said shift actuator to perform a series of indexed downshifts.” ’291 Patent Reexamination Certificate col.7 ll.3-5. Contrary to SRAM’s contentions, AD-II points to specific teachings in the Japanese reference to support its anticipation argument. AD-II notes that the Japanese reference discloses an “operating member being adjustably rotatable to several specific angles centered on the axis of the mounting unit, these several specific angles being correlated with different gear ratios states,” J.A. 4568 (element numbers omitted). AD-II also points out that the reference discloses a detent-based “stopping means for regulating the specific angle of the operating member,” *id.* 4570 (element numbers omitted), and explains that the disclosed device performs indexed downshifts because the device is used “to shift the drive chain between several gears mounted on the drive wheel,” *id.* 4574. Because SRAM failed to challenge these teachings and because no other genuine issues of material fact have been raised, summary judgment of invalidity of claim 27 is appropriate.

Finally, there is no genuine issue of material fact that the Japanese reference is enabling in the sense required to support anticipation under section 102. The declaration provided by the inventor of the Japanese reference merely stated that he

never created a model of the shifter described in the reference that worked with a derailleur and that he was unaware of anyone who had. The question, however, is not whether the inventor built or could have built an operative model of the device, but whether the reference discloses each of the steps of the claimed method. Schering Corp., 339 F.3d at 1380 (noting that a prior art reference may be enabling “even if [its] author or inventor did not actually make or reduce to practice [the disclosed] subject matter.” (citation omitted)). As noted above, we find no genuine issue of material fact as to the disclosure in the Japanese reference of each of the method steps recited in claims 16 and 27. SRAM’s contention that the demonstration it conducted during the reexamination proceeding proved that the shifter cannot perform the method of downshifting described in the claims is both inapposite and irrelevant. This demonstration simply provides evidence that the model built does not perform precise indexed downshifting, which is not recited in either claim 16 or claim 27.

Because there are no genuine issues of material fact on this record that the Japanese reference discloses each and every limitation of claims 16 and 27 and contains an enabling disclosure in the sense of section 102, we hold as a matter of law that the Japanese reference anticipates claims 16 and 27. In light of our holding, we need not and do not address AD-II’s remaining arguments.

CONCLUSION

The district court’s denial of AD-II’s motions for summary judgment of invalidity of claims 16 and 27 based on the Japanese reference is reversed.

REVERSED