

United States Court of Appeals for the Federal Circuit

2007-1490, -1491

FLOYD M. MINKS,

Plaintiff-Appellant,

v.

POLARIS INDUSTRIES, INC.,

Defendant-Cross Appellant.

Christopher T. Hill, Scarborough, Hill & Rugh, of Orlando, Florida, argued for plaintiff-appellant. With him on the brief were Herbert L. Allen and Stephen H. Luther, Allen, Dyer, Doppelt, Milbrath & Gilchrist, of Orlando, Florida.

Kenneth C. Bass, III, Sterne, Kessler, Goldstein & Fox P.L.L.C., of Washington, DC, argued for defendant-cross appellant. With him on the brief was Jon E. Wright. Of counsel on the brief was Joseph J. Jacobi, Kirkland & Ellis LLP, of Chicago, Illinois.

Appealed from: United States District Court for the Middle District of Florida

Judge Gregory A. Presnell

United States Court of Appeals for the Federal Circuit

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FLOYD M. MINKS,

Plaintiff-Appellant,

v.

POLARIS INDUSTRIES, INC.,

Defendant-Cross Appellant.

Appeals from the United States District Court for the Middle District of Florida
in case no. 6:05-CV-1894, Judge Gregory A. Presnell.

DECIDED: October 17, 2008

Before NEWMAN, PLAGER, and GAJARSA, Circuit Judges.

GAJARSA, Circuit Judge.

This is a patent infringement case. Floyd M. Minks (“Minks”) appeals from a final judgment that Polaris Industries (“Polaris”) willfully infringed claim 2 of U.S. Patent No. 4,664,080 (“the ‘080 patent”).¹ After a jury trial, the district court reduced the jury’s damages award from \$1,294,620.91 to \$55,809.60 (after doubling) and awarded attorney fees of \$117,316.50, about half the requested amount. Minks appeals the reduction in damages, as well as the amount of attorney fees awarded. He also asserts on appeal that the jury instruction as to the date Polaris received actual notice of the alleged infringement was erroneous. Polaris cross-appeals from the district court’s

¹ The ‘080 patent expired on October 28, 2005.

denial of its motion for judgment as a matter of law (“JMOL”) on noninfringement and from the jury’s finding of willfulness. Because the district court reduced the jury’s compensatory damages award without offering Minks a new trial, and because the court’s instruction on actual notice failed to apprise the jury of the proper legal standard, he is entitled to a new trial on damages. Conversely, we affirm the award of attorney fees, but we note that the trial judge may exercise his discretion to modify the award if it warrants further consideration on remand. Additionally, because the jury’s finding of infringement is supported by substantial evidence, we affirm the district court’s denial of Polaris’ JMOL motion. We also affirm the jury’s finding of willful infringement because Polaris has failed to establish plain error in the willfulness instruction to the jury.

BACKGROUND

The ’080 patent is directed to an electronic governor system for internal combustion engines. ’080 patent col.1 ll.5–8. In particular, the ’080 patent teaches a circuit to limit the speed of an all-terrain vehicle (“ATV”) when it is operated in the reverse direction—i.e., a reverse speed limiter. Id. at col.1 ll.11–39. The reverse speed limiter circuit of the ’080 patent is activated by shifting the ATV into reverse gear so that the circuit senses the direct current (“DC”) voltage used to illuminate a reverse indicator or back up illumination lamp on the ATV—point A of Figure 2. Id. at col.2 ll.36–44. If the engine is coupled to a permanent magnet type alternator, the alternating current (“AC”) output will increase linearly with engine speed. Id. at col.2 ll.9–15. Accordingly, once activated, the circuit depicted in Figure 2 of the ’080 patent senses the alternator’s AC voltage output—point B of Figure 2—thereby sensing engine speed. Id. at col.2 l.67

to col.3 l.3. If the alternator's AC voltage output exceeds a predetermined limit, the

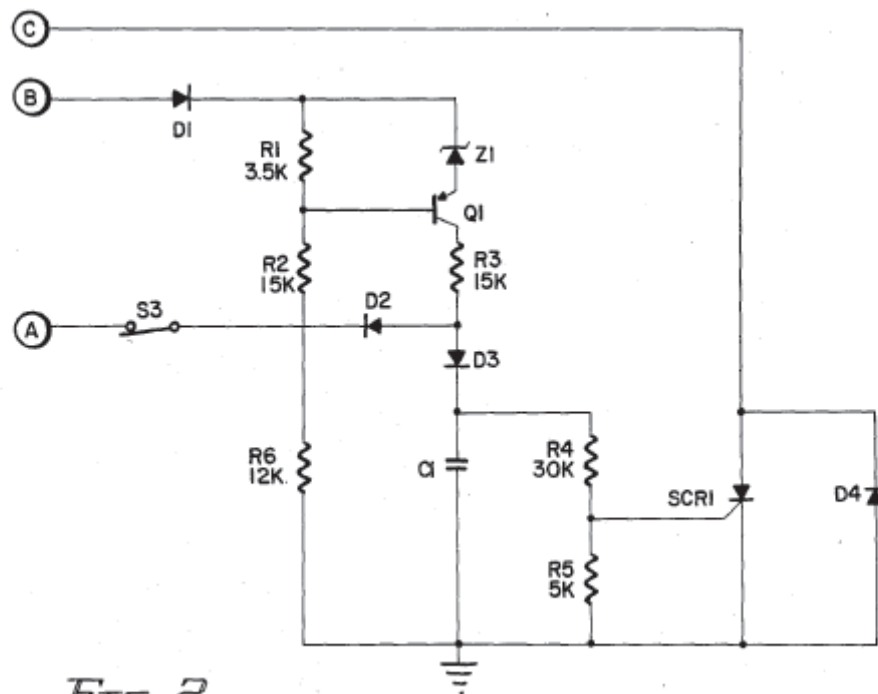


FIG. 2

circuit emits a control signal to interrupt the ignition of the engine—point C of Figure 2.

Id. at col.4 ll.16–23. Engine ignition is restored when the engine speed decreases to the point that the alternator's AC voltage output falls below the predetermined limit. Id. at col.4 ll.20–23.

Claim 2 of '080 patent is the only asserted claim. It states:

A system for selectively inhibiting ignition above a preselected engine speed for an internal combustion engine, said system comprising:

- (a) means for providing an electrical input which varies in a predetermined manner with engine speed;
- (b) control means adapted to control the ignition of said engine, said control means including means for inhibiting ignition responsive to a control signal; and
- (c) means for providing said control signal responsive to a direct current voltage input to thereby selectively inhibit

ignition responsive to the speed of said engine.

'080 patent col.5 ll.51-65. The parties agree both that claim 2 is a means-plus-function claim to be analyzed under 35 U.S.C. § 112 ¶ 6 and that Figure 2 is the only structure disclosed in the '080 patent that corresponds to claim 2.

Minks, the inventor of the '080 patent, is an electrical engineer who designs electronic components for a variety of vehicle types including ATVs. Minks designs and patents the components, which are then manufactured and sold by Minks Engineering, Inc.,² the exclusive licensee of the '080 patent. Polaris is a manufacturer of ATVs that has been purchasing electrical components from Minks Engineering since about 1970. The reverse speed limiter of the '080 patent stems from one of Minks' designs for Polaris. In 1996, Polaris engaged Minks in discussions regarding the '080 patent and the ability to purchase reverse speed limiters from different manufacturers. At this point, Minks informed Polaris that reverse speed limiters based on engine speed and a DC input were covered by the '080 patent. During that same time period, Polaris began implementing a new speedometer in its ATVs that had an integrated reverse speed limiter, which Polaris described to Minks as sensing ground speed rather than engine speed. In 2000 or 2001, Polaris got a quote from a new vendor for a part that included a reverse speed limiter, but on September 24, 2001, Minks sent Polaris a letter confirming that the new vendor was refusing to build the quoted part because it would infringe the '080 patent. In 2002, Polaris and Minks exchanged additional communications regarding Polaris' continued interest in licensing the '080 patent. Also in 2002, Minks discovered that, contrary to Polaris' earlier representations, Polaris' new

² Minks is the president of Minks Engineering, but he is not a shareholder.

integrated reverse speed limiters did sense engine speed. Accordingly, Minks purchased a Polaris ATV, confirmed that it infringed the '080 patent, and sent Polaris a letter to this effect on November 23, 2004.

On December 22, 2005, Minks filed suit against Polaris, alleging that Polaris infringed apparatus claim 2 of the '080 patent. After a four-day trial, the jury found that Polaris received actual notice of alleged infringement on November 23, 2004, that Polaris willfully infringed claim 2 of the '080 patent, and that Minks was entitled to \$1,294,620.91 in royalty damages. The district court subsequently granted Polaris' Motion for a Reduction in Damages or Remittitur Pursuant to Rule 59(e) and reduced the jury's damages award to \$27,904.80. Minks v. Polaris Indus., Inc., No. 6:05-cv-1894 (M.D. Fla. May 22, 2007) (Damages Reduction Order). The court, however, reduced the damages award as a matter of law under Federal Rule of Civil Procedure 50 without offering Minks a new trial on damages. Id. at 12–13. Based on the jury's finding of willfulness, the court doubled this award to \$55,809.60 in an amended judgment entered on May 23, 2007. The court also awarded attorney fees plus costs; however, in accordance with the reduction in damages, the court awarded \$117,316.50 in fees and costs—approximately half of the amount requested. Final judgment was entered on June 14, 2007, and the court denied Minks' motion for reconsideration on June 29, 2007.

Minks filed a notice of appeal on July 25, 2007, challenging the district court's reduction of the damages award, the amount of attorney fees awarded, and the jury instruction on actual notice. On August 2, 2007, Polaris filed a notice of cross-appeal from the district court's denial of its JMOL motion on noninfringement. On September

17, 2007, shortly after this court issued its decision in In re Seagate Technology, LLC, 174 F.3d 1360 (Fed. Cir. 2007) (en banc), Polaris filed an Amended Notice of Cross-Appeal, appealing the enhancement of damages and grant of attorney fees on the grounds that the jury instruction on willfulness was plain error under Seagate. We have jurisdiction over this appeal pursuant to 28 U.S.C. § 1295(a).

DISCUSSION

“We review issues not unique to patent law according to the law of the regional circuit where appeals from the district court would normally lie.” Tronzo v. Biomet, 236 F.3d 1342, 1346 (Fed. Cir. 2001) (Tronzo II).

I. DAMAGES

In this case, the jury awarded over one million dollars in compensatory royalty damages to Minks, but the trial court granted Polaris’ Rule 50 motion for a reduction of damages and reduced this award to less than thirty thousand dollars without offering Minks the option of a new trial. The court noted that although “[t]he Seventh Amendment [ordinarily] requires that a plaintiff be given the option of a new trial in lieu of remitting a portion of the jury award[,] . . . this mandate does not apply when the reduction in a damages award is necessitated by legal error.” Damages Reduction Order at 24 (citing Johansen v. Combustion Eng’g, Inc., 170 F.3d 1320, 1329–30 (11th Cir. 1999)). Applying this rule, the court reviewed Minks’ evidence on damages and found legal error, concluding that “at most the legally competent evidence in the record supported a jury award based on a price per reverse speed limiter of \$6.11, a reasonable royalty of 4 percent, and total infringing sales during the pertinent period of 116,270, for a total compensatory damage award of \$27,904.80.” Id. at 33. The issue

before us on appeal is whether the Seventh Amendment required the district court to offer Minks the option of a new trial in lieu of accepting the reduced damages award.³

In the Eleventh Circuit, the district court's decision to reduce the jury's damages award without offering Minks a new trial is a matter of law reviewed de novo. See Johansen, 170 F.3d at 1335; see also Tronzo II, 236 F.3d at 1351 (identifying issue as a matter of law).

The Reexamination Clause of the Seventh Amendment states that “no fact tried by a jury, shall be otherwise re-examined in any Court of the United States, than according to the rules of common law.” U.S. Const. amend. VII. “[T]he Reexamination Clause does not inhibit the authority of a trial judge to grant new trials ‘for any of the reasons for which new trials have heretofore been granted in actions at law in the courts of the United States.’” Gasperini v. Ctr. for Humanities, Inc., 518 U.S. 415, 433 (1996). This authority extends to “overturning verdicts for excessiveness and ordering a new trial without qualification, or conditioned on the verdict winner’s refusal to agree to a reduction (remittitur).” Id. (citing Dimick v. Schiedt, 293 U.S. 474, 486–87 (1935)). Nevertheless, the Supreme Court has long interpreted the Seventh Amendment as requiring that the exercise of a district court’s discretion to set aside an excessive jury award be accompanied by an offer of a new trial. For example, in Kennon v. Gilmer the Court stated:

³ Minks also argues that the jury’s damages award should be reinstated by this court, but the Eleventh Circuit is unclear as to whether such relief is available. See Johansen, 170 F.3d at 1333 n.23 (stating that if the jury award was reduced too much, the case would be remanded with instructions to offer the plaintiff a new trial). Moreover, Minks has failed to articulate any explanation for how the jury might have calculated the compensatory damages it awarded. For these reasons, we reject Minks’ argument that the jury’s award should be reinstated.

[I]n a case in which damages for a tort have been assessed by a jury at an entire sum, no court of law, upon a motion for a new trial for excessive damages and for insufficiency of the evidence to support the verdict, is authorized, according to its own estimate of the amount of damages which the plaintiff ought to have recovered, to enter an absolute judgment for any other sum than that assessed by the jury.

131 U.S. 22, 29 (1889). The Court reaffirmed this principle in Hetzel v. Prince William County, holding that the entry of judgment for a lesser amount than that awarded by the jury, without the offer of a new trial, “cannot be squared with the Seventh Amendment” when the reduction is premised on a finding that the evidence does not support the award. 523 U.S. 208, 211 (1998).

Despite its recognition of this rule, the Eleventh Circuit held in Johansen that when a jury’s award is premised on “legal error,” a court may reduce the award and enter an absolute judgment in an amount sufficient to correct the legal error without offering the plaintiff the option of a new trial. Compare Johansen, 170 F.3d at 1328, 1331 (stating that “the Seventh Amendment prohibits reexamination of a jury’s determination of the facts, which includes its assessment of the extent of plaintiff’s injury,” and analyzing Hetzel), with id. at 1330–31 (“The Seventh Amendment is not offended by this reduction because the issue is one of law and not fact.”). Johansen considered whether a federal court may reduce a punitive damages award by an amount required by the Due Process Clause of the Fourteenth Amendment without offering the plaintiff a new trial. In its analysis, the court identified two types of legal error that permit the reduction of a jury award without the offer of a new trial. First, “where a portion of a verdict is for an identifiable amount that is not permitted by law, the court may simply modify the jury’s verdict to that extent and enter judgment for the correct amount.” Id. at 1330 (citing N.Y., L.E. & W.R. Co. v. Estill, 147 U.S. 591

(1893)).⁴ Second, a court may reduce a jury’s punitive damages award when the award “enter[s] that ‘zone of arbitrariness that violates the Due Process Clause of the Fourteenth Amendment.’” Id. at 1331, 1334 (quoting BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 568 (1996)). Importantly, both types of error derive from the operation of legal principles without regard to the evidence presented by the plaintiff. That is, legal errors permitting the reduction of a jury award without the offer of a new trial arise without regard to whether the jury’s award is or is not supportable as an evidentiary matter.⁵

Under the Eleventh Circuit’s analysis of Supreme Court precedent, we conclude that the district court’s reduction of the jury’s compensatory damages award in this case is governed squarely by Hetzel. The jury found the ’080 patent valid and infringed, and awarded Minks a reasonable royalty of \$1,294,620.91. In its analysis of this award, the district court identified no legal principle—such as was present in Estill (state law prohibition on awarding interest) or Johansen (Due Process Clause of the Fourteenth Amendment)—that would limit the amount of a reasonable royalty in this case. Rather, the district court examined the evidence in the record with respect to the components of a reasonable royalty—number of infringing sales, royalty base, and royalty rate—and found that the evidence could not support the jury’s damages award. Damages Reduction Order at 25–28. The court further found that “at most the legally competent

⁴ In Estill, the jury awarded a tort plaintiff both compensatory damages and interest on that amount. 147 U.S. at 619. Upon a determination that interest was not recoverable in such actions under state law, the Court vacated the interest portion of the jury award and remanded the case to the district court with instructions to enter judgment in the amount of the jury’s compensatory award—no offer of a new trial was required. Id. at 622.

⁵ In Estill, for example, the jury’s award of interest was prohibited by state law, irrespective of whether the amount of the award would have been correct if awardable.

evidence in the record supported a jury award based on a price per reverse speed limiter of \$6.11, a reasonable royalty of 4 percent, and total infringing sales of 116,270, for a total compensatory damage award of \$27,904.80.” Id. at 33. Despite its effort to cast this decision as one of law rather than fact, the court necessarily engaged in an independent review of the evidence and substituted its conclusion for that of the jury on the factual issue of compensatory damages. Cf. Cooper Indus., Inc. v. Leatherman Tool Group, Inc., 532 U.S. 424, 437 (2001) (“Unlike the measure of actual damages suffered, which presents a question of historical or predictive fact, the level of punitive damages is not really a “fact” “tried” by the jury.” (quoting Gasperini, 518 U.S. at 448, 459 (1996) (Scalia, J., dissenting))); see also Micro Chem., Inc. v. Lextron, Inc., 317 F.3d 1387, 1394 (Fed. Cir. 2003) (“The amount of damages based on a reasonable royalty is an issue of fact.”).

Under 35 U.S.C. § 284, Minks is entitled to a compensatory award no less than a reasonable royalty. Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1554 (Fed. Cir. 1995) (“A patentee is entitled to no less than a reasonable royalty on an infringer’s sales for which the patentee has not established entitlement to lost profits.” (citing 35 U.S.C. § 284 (1988))). A reasonable royalty “may be based upon an established royalty, if there is one, or if not, upon the supposed result of hypothetical negotiations between the plaintiff and defendant.” Id. (citing Hanson v. Alpine Valley Ski Area, Inc., 718 F.2d 1075, 1078 (Fed. Cir. 1983)). “The hypothetical negotiation requires the court to envision the terms of a licensing agreement reached as the result of a supposed meeting between the patentee and the infringer at the time infringement began.” Id. A determination of the royalty stemming from a hypothetical negotiation is often made by

assessing factors such as those set forth in Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970). See Maxwell v. J. Baker, Inc., 86 F.3d 1098, 1109–10 (Fed. Cir. 1996); Rite-Hite, 56 F.3d at 1554–55. A comparison of the Georgia-Pacific factors and the standard of a hypothetical negotiation to the evidence of record in this case makes clear that the district court's reduction of compensatory damages necessarily amounted to an assessment of the sufficiency of the evidence, and as such, the option of a new trial was required.

The first Georgia-Pacific factor looks to “[t]he royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty.” 318 F. Supp. at 1120. The district court relied on the most recent agreement between Minks and Minks Engineering, under which Minks receives a four percent royalty on total gross sales of patented and unpatented items, yet Minks testified that this agreement was but the latest in a series of royalty agreements. Under a previous agreement, for example, Minks had received a ten percent royalty based solely on the sale of patented items. As the reasonable royalty award to which Minks is entitled in this case is based solely on patented reverse speed limiters, the district court was required to assess the sufficiency of Minks’ testimony to support an established royalty of four percent, ten percent, or some other rate.

Similarly, the sixth Georgia-Pacific factor looks to “[t]he effect of selling the patented specialty in promoting sales of other products of the licensee; that existing value of the invention to the licensor as a generator of sales of his non-patented items;

and the extent of such derivative or convoyed sales.”⁶ 318 F. Supp. at 1120. In this case, Polaris discussed licensing the '080 patent from Minks beginning in 1997, but Minks refused. Instead, the parties negotiated an agreement under which Polaris ordered approximately \$7 million in both patented and unpatented merchandise over several years. During that time, Minks was compensated at a rate of four percent on all these sales. Accordingly, the district court must have assessed whether the evidence of these negotiations, in which Minks was able to secure sales of non-patented items, was sufficient to support a reasonable royalty rate higher than four percent.

Finally, the hypothetical negotiation is deemed to be an arm's length transaction. Rite-Hite, 56 F.3d at 1576. Courts should not, therefore, accept “as conclusive the royalty arrangement between the patent owner and the single licensee, a close corporation owned by the inventor's family” Cheramie v. Orgeron, 434 F.2d 721, 727 (5th Cir. 1970). Indeed, the district court in Rite-Hite employed this exact reasoning in its determination of the royalty rate that was affirmed by this court. See Rite-Hite Corp. v. Kelley Co., 774 F. Supp. 1514, 1535 (E.D. Wis. 1991), aff'd in part, rev'd in part, 56 F.3d 1538 (Fed. Cir. 1995) (“This court also places little weight upon the royalty rate that Mike White paid for Rite-Hite patents when Mike White bought Rite-Hite from his father. Such an intra-family sale is too dissimilar from this hypothetical situation in which one competitor voluntarily grants a novel license to its primary competitor.”); see also Ziggity Sys., Inc. v. Val Watering Sys., 769 F. Supp. 752, 826 (E.D. Pa. 1990)

⁶ In Rite-Hite, this court clarified that “the relevance of anticipated collateral sales to the determination of a reasonable royalty rate” is not to be confused with the application of the entire market value rule to a determination of the royalty base. 56 F.3d at 1549 n.9 (citing Deere & Co. v. Int'l Harvester Co., 710 F.2d 1551, 1559 (Fed. Cir. 1983)) (emphasis added).

("Eldon Hostetler owns part of Ziggity and, therefore, has an interest in assigning his patent rights to Ziggity in exchange for a low royalty rate. What is a reasonable royalty rate between an inventor and his own company is clearly not a reasonable royalty rate between two competitors in the same line of business."). Although the record is not wholly clear on the relationship between Minks and Minks Engineering, they are not competitors. As such, the district court must have considered whether the evidence in this case warranted a departure from the royalty rate established between Minks and Minks Engineering.

We need not consider the exact reasonable royalty supported by this evidence. Gasperini, 518 U.S. at 433. However, the district court's exercise of discretion to assess the evidence and overturn the jury's verdict upon a determination that it is excessive may only result in the order of a new trial, either unqualified or conditioned on Minks' refusal to accept a reduction. Id.; see also Hetzel, 523 U.S. at 211 (stating that entry of "judgment for a lesser amount than that determined by the jury without allowing petitioner the option of a new trial, cannot be squared with the Seventh Amendment").

We further conclude that this court's decision in Tronzo II is not to the contrary. Tronzo II affirmed the judgment of the district court, entered following this court's remand order in Tronzo v. Biomet, Inc., 156 F.3d 1154 (Fed. Cir. 1998) (Tronzo I), which reduced a jury's compensatory damages award without offering the plaintiff a new

trial. To the extent that Tronzo II remains good law,⁷ the facts and procedure of that case are distinguishable from the present appeal.

In Tronzo I, the defendant appealed from a jury verdict of willful patent infringement, breach of a confidential relationship, and fraud. After reversing the judgment of infringement or validity as to all asserted claims of the patent, the court considered whether the compensatory damage award for the state law claims was supportable under either a constructive trust (lost profits) theory or a reasonable royalty. Tronzo I, 156 F.3d at 1160–61. The court ruled that neither remedy was available under state law because these types of awards lack the requisite “nexus between the damages claimed and the injury incurred.” Id. at 1161 (citing Rucker v. Garlock, Inc., 672 So. 2d 100, 102 (Fla. Dist. Ct. App. 1996)). Moreover, because tort damages are awarded to “place the plaintiff in the position he would have been absent the tortious conduct,” the court remanded the case to the district court for a determination of whether the record contained “evidence to prove any of the costs and injuries incurred

⁷ Tronzo II relied on Johansen’s analysis of Due Process Clause limitations on punitive damage awards and their interplay with the Seventh Amendment right to a jury trial, but the Supreme Court has clarified that the Reexamination Clause of the Seventh Amendment applies to punitive damage awards in a manner that differs from its application to compensatory damage awards. In Cooper Industries, the Court considered the proper standard of review “when passing on district courts’ determination of the constitutionality of punitive damage awards.” 532 U.S. at 436. In concluding that a de novo standard of review was both appropriate and permissible, the Court reasoned that “[u]nlike the measure of actual damages suffered,” the level of punitive damages is not a “fact” tried to the jury as that term is used in the Reexamination Clause of the Seventh Amendment. Id. at 437; cf. id. at 432 (reasoning that compensatory damages “are intended to redress the concrete loss that the plaintiff has suffered by reason of the defendant’s wrongful conduct,” whereas punitive damages “operate as ‘private fines’ intended to punish the defendant and to deter future wrongdoing”). Accordingly, Tronzo II’s affirmance of a reduction of a compensatory damages award without the offer of a new trial may be inconsistent with the Supreme Court’s reasoning in Cooper Industries.

by [the plaintiff], such as the costs of prosecuting the patent and lost business opportunities.” Id.

On remand, the district court found, aside from \$520 in patent prosecution costs, “a ‘complete absence of competent substantial evidence’” to support the award of damages in tort. Tronzo II, 236 F.3d at 1345 (quoting district court opinion on remand). The district court further declined to re-open the record and take new evidence on damages actually sustained by the plaintiff, reasoning that “both parties had been represented by competent counsel and had made strategic decisions in this protracted litigation.” Id. Accordingly, the district court entered a judgment for compensatory damages of \$520 on the state law claims (reduced from the initial jury award of \$7,134,000) without offering the plaintiff the option of a new trial.

In its affirmance of the district court’s reduction of the compensatory damages award, Tronzo II ruled that the reduction was made on “purely legal grounds.” 236 F.3d at 1351 (citing Johansen, 170 F.3d at 1330, for the proposition that such a reduction need not be accompanied by the option of a new trial). Because the plaintiff “never introduced any legally competent evidence to support” an award of lost business opportunities damages—i.e., the plaintiff only introduced evidence of the gain realized by the defendant that the court rejected in Tronzo I—“the district court did not reweigh any evidence, nor did it exercise its discretion in computing the damages award.” Id. (emphases added). To reach this result, the court distinguished Hetzel on the grounds that the reduction of the compensatory award in that case was an exercise of discretion based on a conclusion that the award was “excessive in light of the limited evidence of harm.” Id. (emphasis added).

Comparing the holding of Tronzo II with the analysis of Hetzel therein, the district court's reduction of compensatory reasonable royalty damages in this case must be adjudged under the rule of Hetzel. As set forth above, Minks has presented at least "limited evidence" that the district court necessarily rejected in adopting a reasonable royalty rate of four percent. Thus, even under Tronzo II, the district court's decision here amounts to an exercise of discretion subject to Hetzel's requirement that Minks be offered a new trial.

For these reasons, we vacate the district court's order reducing the jury's compensatory damages award to \$27,904.80, and we remand for a new trial on damages.

II. ATTORNEY FEES

Based on the jury's finding of willful infringement, the district court found the case exceptional and awarded Minks enhanced damages and attorney fees under 35 U.S.C. § 285. The court determined that a "reasonable fee" under this section would be \$234,663.00, after all deductions. However, the district court criticized Minks' damages theory as "economic nonsense" and only awarded half the reasonable fee to offset the "great deal of time during trial [that] was wasted by Plaintiff attempting to evade the basic laws of economics and common sense." We review an award of attorney fees for an abuse of discretion. ACCO Brands, Inc. v. ABA Locks Mfrs. Co., 501 F.3d 1307, 1312 (Fed. Cir. 2007). Although we herein vacate the district court's judgment reducing the compensatory damages award without offering Minks a new trial, we detect no abuse of discretion in the award of attorney fees. Even on appeal, Minks remains unable or unwilling to articulate a coherent damages theory. We therefore affirm the

award of attorney fees, but we note that the trial judge may exercise his discretion to modify the award if it warrants further consideration on remand.

III. NOTICE INSTRUCTION

Under 35 U.S.C. § 287(a), where a patentee has failed to mark its patented product, “no damages shall be recovered by the patentee in any action for infringement, except on proof that the infringer was notified of the infringement and continued to infringe thereafter, in which event damages may be recovered only for infringement occurring after such notice.” Neither party disputes that Minks Engineering did not mark its products and that the damages recoverable by Minks are therefore limited by the date that Polaris received notice satisfying the requirements of § 287(a). The jury found that Minks’ November 23, 2004 letter to Polaris, which informed Polaris of Minks’ belief that Polaris’ integrated reverse speed limiters infringed the ’080 patent, satisfied § 287(a)’s notice requirement. Minks did not move for JMOL on the issue of notice under § 287(a), but he does seek a new trial based on legal error in the court’s instructions to the jury.

Despite the absence of a motion for JMOL, Minks “may still challenge a jury verdict by establishing that the judge committed legal error or abused his discretion.” Advanced Display Sys., Inc. v. Kent State Univ., 212 F.3d 1272, 1281 (Fed. Cir. 2000). If a jury instruction is objected to, and a curative instruction was requested, we review the instruction de novo for legal error. United States v. Klopff, 423 F.3d 1228, 1241 (11th Cir. 2005) (“A trial judge’s refusal to give a requested instruction will warrant a new trial only if (1) the requested instruction was substantively correct, (2) the court’s charge to the jury did not cover the gist of the instruction, and (3) the failure to give the

instruction substantially impaired the defendant's ability to present an effective defense.” (quoting United States v. Roberts, 308 F.3d 1147, 1153 (11th Cir. 2002) (per curiam)); see also Serio-US Indus., Inc. v. Plastic Recovery Techs. Corp., 459 F.3d 1311, 1317 (Fed. Cir. 2006) (“A party seeking to alter a judgment based on erroneous jury instructions must establish that (1) it made a proper and timely objection to the jury instructions, (2) those instructions were legally erroneous, (3) the errors had prejudicial effect, and (4) it requested alternative instructions that would have remedied the error.”). “In deciding whether a defendant's requested instruction was substantially covered by the actual charge delivered to the jury, we ‘need only ascertain whether the charge, when viewed as a whole, fairly and correctly states the issues and the law.’” Klopf, 423 F.3d at 1241 (quoting United States v. Gonzalez, 975 F.2d 1514, 1517 (11th Cir. 1992)).

The district court gave the following instruction on actual notice:

The date notice was given is the date on which Minks communicated to Polaris a specific charge that one of its products may infringe claim two of the '080 patent.

Minks objected to this instruction on the grounds that it precludes a jury from finding notice prior to discovery of Polaris' infringement. Minks thus requested the following instruction:

The date notice was given is the date on which Minks communicated to Polaris a specific charge that one of its products infringed or would infringe claim two of the '080 Patent.

Minks argues that the proposed instruction indicates that a patentee can provide sufficiently specific notice to an accused infringer before the patentee discovers the actual infringement by the accused. We agree with Minks that the given instruction does not fairly and correctly state the issues and the law; the jury should have been

more clearly instructed that it was permitted to find notice prior to the date Minks discovered Polaris' infringement.

Section 287(a) requires actual notice to the accused "to assure that the recipient knew of the adverse patent during the period in which liability accrues, when constructive notice by marking is absent." SRI Int'l, Inc. v. Adv. Tech. Labs., Inc., 127 F.3d 1462, 1470 (Fed. Cir. 1997). "[I]n SRI we explained that as long as the communication from the patentee provides sufficient specificity regarding its belief that the recipient may be an infringer, the statutory requirement of actual notice is met. Thus, the requirement of 'a specific charge of infringement' set forth in Amsted does not mean the patentee must make an 'unqualified charge of infringement.'" Gart v. Logitech, Inc., 254 F.3d 1334, 1345–46 (Fed. Cir. 2001) (internal citation omitted). Under this standard, general letters referring to the patent and including an admonishment not to infringe do not constitute actual notice. See Amsted Indus. Inc. v. Buckeye Steel Casting Co., 24 F.3d 178, 187 (Fed. Cir. 1994). Conversely, letters that specifically identify a product and offer a license for that product do constitute actual notice. See Gart, 254 F.3d at 1346.

Under our case law, Minks made a qualified charge of infringement when he informed Polaris that reverse speed limiters that sensed engine speed and a DC input infringe the '080 patent. Actual notice thus turns on the point at which this charge—in any of its various forms in the history of the relationship between Minks and Polaris—was sufficiently specific such that Polaris "knew of the adverse patent and the alleged infringement." Gart, 254 F.3d at 1345. As a long time customer of Minks Engineering, Polaris knew of the '080 patent. Moreover, as early as 1997, Minks specifically

communicated his belief that reverse speed limiters sensing engine speed and a DC input infringe the '080 patent. Similarly, on September 24, 2001, Minks sent Polaris a letter confirming that a third party vendor was refusing to build a quoted reverse speed limiter for Polaris because the quoted part would infringe the '080 patent. During this time period, Polaris misrepresented the nature of its substitute reverse speed limiter, employed since 1996, as sensing ground speed rather than engine speed. Although it is not for us to determine whether, as a factual matter, any of these exchanges were sufficient actual notice under § 287(a), the court's instruction to the jury should have more clearly articulated that, in the context of this ongoing relationship between the parties, knowledge of a specific infringing device is not a legal prerequisite to such a finding.

IV. INFRINGEMENT

Polaris cross-appeals from the district court's denial of its JMOL motion on noninfringement.⁸ The denial of a JMOL motion is also reviewed de novo, applying the same standard as the district court. Nebula Glass Int'l, Inc. v. Reichold, Inc., 454 F.3d 1203, 1210 (11th Cir. 2006). When conducting this analysis, the jury's verdict is reviewed for substantial evidence, drawing all reasonable inferences in favor of the nonmovant. Id.; Odetics, Inc. v. Storage Tech. Corp., 185 F.3d 1259, 1269 (Fed. Cir. 1999). Substantial evidence is evidence relevant to the matter at hand that a reasonable mind might accept as adequate to support a conclusion. Id. "Judgment as a matter of law is appropriate when 'a party has been fully heard on an issue and there

⁸ Polaris' motion in the district court sought both JMOL or alternatively a new trial. The court denied both aspects of the motion, and Polaris does not seek a new trial in its cross-appeal.

is no legally sufficient evidentiary basis for a reasonable jury to find for that party on that issue.” Go Med. Indus. Pty., Ltd. v. Inmed Corp., 471 F.3d 1264, 1272 (Fed. Cir. 2006) (quoting Fed. R. Civ. P. 50(a)).

The parties do not dispute that claim 2 of the '080 patent is a means plus function claim that falls under 35 U.S.C. § 112 ¶ 6. That paragraph states:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 112 ¶ 6 (2000). “The first step in construing such a limitation is to identify the function of the means-plus-function limitation.” Texas Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193, 1208 (Fed. Cir. 2002). “The next step is to identify the corresponding structure in the written description necessary to perform that function.” Id. ““Structure disclosed in the specification is “corresponding” structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.”” Id. (quoting B. Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 1424 (Fed. Cir. 1997)). Because Figure 2 in the '080 patent is the only structure linked or associated with the functions required by claim 2, the district court concluded that “the means-plus-function limitations of claim 2 are limited to the structures set forth in Figure 2 (and their equivalents).” Minks v. Polaris Indus., Inc., 464 F. Supp. 2d 1229, 1233 (M.D. Fla. 2006).

The parties do not dispute that the circuitry of the accused devices differs from that taught by Figure 2 of the '080 patent. Specifically, Polaris' ATVs sense engine speed based on the frequency of the alternator's AC output, while the circuit of Figure 2

is only capable of sensing the voltage of an alternator's AC output.⁹ As such, the parties also agree that the accused circuitry has different components than those shown in Figure 2 of the '080 patent. Nevertheless, the district court denied Polaris' JMOL motion of noninfringement, ruling that

the jury heard evidence that the amplitude and the frequency of the AC voltage both vary predictably with engine speed and that, to one skilled in the art of circuit design/electrical engineering, they are equivalent for purposes of determining speed. As such the jury could reasonably conclude that the methods employed in the '080 Patent and in the accused devices were equivalent or interchangeable.

Minks v. Polaris Indus., Inc., No. 6:05-cv-1894 (M.D. Fla. May 15, 2007). We agree with the district court.

To determine whether a particular means-plus-function limitation is met, “the court must compare the accused structure with the disclosed structure, and must find equivalent structure as well as identity of claimed function for that structure.” Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., 145 F.3d 1303, 1308 (Fed. Cir. 1998) (quoting Pennwalt Corp. v. Durand-Wayland, Inc., 833 F.2d 931, 934 (Fed. Cir. 1987) (en banc)). Polaris argues that the accused devices do not have an identical function to the claimed function because the accused devices sense the frequency of the alternator's AC output rather than its peak voltage. However, the function for which the accused device must be identical is the function specified in the claim. Mas-Hamilton Group v. LaGard, Inc., 156 F.3d 1206, 1211–12 (Fed. Cir. 1998) (citing

⁹ Alternating current has two main properties: amplitude, measured in voltage, and frequency, measured in hertz. Thus the accused device senses engine speed by measuring the number of alternating cycles per second, while Figure 2 depicts an embodiment of the invention that senses engine speed by measuring the peak voltage in a cycle.

Pennwalt, 833 F.2d at 934). Here, the function of element (c) of claim 2 is “providing said control signal responsive to a direct current voltage input to thereby selectively inhibit ignition responsive to the speed of said engine.”¹⁰ ’080 patent col.5 ll.62–65 (emphasis added). Polaris makes no argument that the accused devices do not perform this claimed function. Accordingly, the district court’s denial of Polaris’ JMOL motion was not improper on this basis.

In addition to identity of function, the accused device must have equivalent structure. Equivalence between the accused structure and that set forth in the specification has been analyzed under “a reduced version of the well-known tripartite test for the doctrine of equivalence”—i.e., “whether it performs the function in substantially the same way to achieve substantially the same result.” IMS Tech., Inc. v. Haas Automation, Inc., 206 F.3d 1422, 1435 (Fed. Cir. 2000). On cross appeal, Polaris argues that a finding of equivalent structure requires a finding that the accused frequency sensitive devices contain components equivalent to the voltage divider R1 and R2 and switching transistor Q1. Polaris further posits, without citation to the record, that this combination of components is responsive only to voltage rather than frequency, and as such, the frequency sensing circuitry of the accused devices cannot be equivalent as a matter of law.

The difference in physical structure alone, however, is not determinative of § 112 ¶ 6 equivalence. Id. at 1436 (“Indeed, the statute requires two structures to be equivalent, but it does not require them to be ‘structurally equivalent,’

¹⁰ The direct current voltage input activates the circuit and differs from the measurement of the alternator’s AC output. ’080 patent col.5 ll.22–25.

i.e., it does not mandate an equivalency comparison that necessarily focuses heavily or exclusively on physical structure.”). Rather, once identity of function is established, the test for infringement is whether the structure of the accused device performs in substantially the same way to achieve substantially the same result as the structure disclosed in the '080 patent. “Evidence of known interchangeability between structure in the accused device and the disclosed structure has also been considered an important factor.” Id. at 1436 (citing Al-Site Corp. v. VSI Int’l, Inc., 174 F.3d 1308, 1319–21 (Fed. Cir. 1999), and Chiuminatta, 145 F.3d at 1309 (citing Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 338 U.S. 605, 609 (1950))).

Under this precedent, we agree with the district court that the jury’s verdict of infringement is supported by substantial evidence that the accused devices meet claim 2 element (c) of the '080 patent. Specifically, both expert testimony and the '080 patent itself indicate that a person of ordinary skill would know that circuitry responsive to the frequency of an AC current is interchangeable with circuitry responsive to the voltage of an AC current. First, as a liability expert, Minks explicitly testified on cross examination that the interchangeability of these circuit types was well known to those skilled in the art of circuit design. Second, the '080 patent refers to point B of Figure 2—the point at which the alternator’s output is sensed—as the “the primary input voltage or frequency lead.” '080 patent col.5 ll.22–25. As noted previously, the patent also teaches that either the frequency or the voltage of a permanent magnet-type alternator may be used to sense engine speed. Id. at col.5 ll.22–25 (“It should be noted that this control lead [Point A] is neither the primary input voltage or frequency lead, point B, or the primary ignition turn off lead, point C . . .”). This record constitutes substantial evidence upon

which a reasonable jury could conclude that the accused devices perform the requisite function in substantially the same way—sensing the frequency of the alternator’s AC output rather than the voltage of that output—to achieve an identical result—interrupting the engine ignition.¹¹

In sum, under the legal standard for infringement of a § 112 ¶ 6 claim, Polaris has not made any argument that the accused devices do not perform a function identical to that recited in the claim, to achieve an identical result. In addition, substantial evidence supports a finding that the accused devices perform in substantially the same way as the circuit disclosed in Figure 2 of the '080 patent. For these reasons, the district court’s denial of Polaris’ JMOL motion is affirmed.

V. Willfulness

Polaris also cross-appeals on the ground that the instruction to the jury on willful infringement, which was unobjected to at trial, constitutes plain error based on this court’s decision in In re Seagate Technology, LLC, 174 F.3d 1360 (Fed. Cir. 2007) (en banc).

Under plain error review, an appellate court must not correct an error the defendant failed to raise in the district court unless there is: (1) error, (2) that is plain, and (3) that affects substantial rights. If all three of those conditions are met, the court may exercise its discretion to notice a forfeited error but only if (4) the error seriously affects the fairness, integrity, or public reputation of judicial proceedings.

United States v. LeCroy, 441 F.3d 914, 930 (11th Cir. 2006). For the error to be “plain,” it must either have been clear under the law at the time the error was made, or clearly contrary to the law at the time of the appeal. United States v. Mitchell, 146 F.3d 1338,

¹¹ That the accused devices achieve this result is not in dispute.

1342–43 (11th Cir. 1998). In addition, when the first two prongs of plain error review are met, the party appealing the error bears the burden of demonstrating that the plain error affected its substantial rights. Id. at 1343. Under this standard, Polaris has failed to show plain error in the jury instruction on willfulness.

The willfulness instruction given by the district court is as follows:

Willfulness must be proven by clear and convincing evidence showing that: One, Polaris had actual knowledge of the '080 patent; and, Two, Polaris had no reasonable basis for believing, A, that its accused product did not infringe the '080 patent, or, B, that the '080 patent was invalid or unenforceable.

In making the determination as to willfulness, you must consider the totality of the circumstances. The totality of the circumstances comprises a number of factors, which include but are not limited to whether Polaris intentionally copied the claimed invention or a product covered by the '080 patent, whether Polaris exercised due care to avoid infringing the patent, whether Polaris relied on competent legal advice, and whether Polaris presented a substantial defense to infringement.

In Seagate, the en banc court overruled Underwater Devices Inc. v. Morrison-Knudsen Co., 717 F.2d 1380 (Fed. Cir. 1983), changing the standard for a finding of willfulness from one of an affirmative duty of care to one of objective recklessness. 497 F.3d at 1371. Polaris thus argues that the given instruction is plain error because it instructs the jury to consider “whether Polaris exercised due care to avoid infringing the patent” rather than whether Polaris’ infringement was objectively reckless.

We need not, however, decide whether the instruction constitutes error that is plain (i.e., the first two of the four requisite elements of plain error) because Polaris makes no argument and cites no evidence to establish that any alleged error affected its substantial rights or affected the fairness, integrity, or public reputation of judicial

proceedings (i.e., the third and fourth elements of plain error). For example, the Eleventh Circuit has explained that to affect substantial rights, “the ‘error must have been prejudicial: It must have affected the outcome of the district court proceedings.’” Mitchell, 146 F.3d at 1343 (quoting United States v. Olano, 507 U.S. 725, 736 (1993)). Under Mitchell then, any plain error in the jury instruction on willfulness only affected Polaris’ substantial rights to the extent that the jury would not have found willfulness if it had received a willfulness instruction lacking such error. Polaris, however, makes no argument with respect to a different outcome under Seagate’s objective recklessness standard. Rather it merely asserts that the jury finding of willfulness affected its substantial rights because it resulted in the imposition of enhanced damages and attorney fees. Moreover, we think Polaris could not have shown that the error in the jury instructions affected its substantial rights even if it had so argued. In particular, in the order granting Minks’ request for enhanced damages, the trial court concluded that “it is fairly clear” that Polaris deliberately copied Minks’ patented reverse speed limiter “and the case was not close.” Accordingly, based on the district court’s review of the record, it appears that error in the jury instruction was not prejudicial because the jury may very well have arrived at the same result. Polaris similarly makes no mention of how this case might “seriously affect[] the fairness, integrity, or public reputation of judicial proceedings.” For these reasons, Polaris has not demonstrated plain error in the jury

instruction on willfulness, and the jury's finding of willful infringement is therefore affirmed.¹²

CONCLUSION

The district court reduced the jury's compensatory damages award without offering Minks a new trial as required by the Seventh Amendment. Additionally, the jury instruction on actual notice under § 287(a) was erroneous and prejudicial to Minks' case. For these reasons, we vacate the district court's judgment on damages and remand for a new trial on these issues. We affirm the award of attorney fees, but we note that the trial judge may exercise his discretion to modify the award if it warrants further consideration on remand. We also affirm the jury's verdict of infringement as supported by substantial evidence. On appeal, Polaris has failed to make any argument regarding two of the four elements of plain error, and we therefore affirm the jury's verdict of willfulness.

AFFIRMED-IN-PART, VACATED-IN-PART, AND REMANDED-IN-PART

COSTS

No costs.

¹² A different result is not required by this court's recent decision in Voda v. Cordis Corp., 536 F.3d 1311 (Fed. Cir. 2008). That case was decided under the law of the Tenth Circuit, which we read as differing significantly from the Eleventh Circuit law that governs here. In particular, we noted in Voda that when "the claimed error in the jury instruction is based on a change in the law that arose after trial, the Tenth Circuit reviews the jury instruction de novo." Id. at 1328 (emphasis added) (citing Anixter v. Home-Stake Prod. Co., 77 F.3d 1215, 1231 (10th Cir. 1996); Key v. Rutherford, 645 F.2d 880, 883 (10th Cir. 1981)). We further noted that under this review, an error in the jury instruction will be affirmed unless the error "could not have changed the result." Id. (quoting World Wide Ass'n of Specialty Programs v. Pure, Inc., 450 F.3d 1132, 1139 (10th Cir. 2006)). The harmless error standard employed in the Tenth Circuit differs greatly from the Eleventh Circuit's plain error review applicable here.