United States Court of Appeals for the Federal Circuit

05-1418,-1432

CORDIS CORPORATION,

Plaintiff-Appellant,

v.

BOSTON SCIENTIFIC CORPORATION and
SCIMED LIFE SYSTEMS, INC. (now known as Boston Scientific Scimed, Inc.),

Defendants-Cross Appellants.

DECIDED: June 29, 2006

Before MAYER, BRYSON, and PROST, Circuit Judges.

BRYSON, Circuit Judge.

This patent case comes to us on appeal from a final judgment of the United States District Court for the District of Delaware. Cordis Corp. v. Medtronic AVE, Inc., 194 F. Supp. 2d 323 (D. Del. 2002). In the underlying litigation, appellant Cordis Corporation sued several defendants, alleging infringement of several of Cordis's patents. The only portion of that case that is relevant to the present appeal is Cordis's claim that Boston Scientific Corporation infringed U.S. Patent No. 5,879,370 ("the '370 patent"), which is directed to stents used in the treatment of coronary artery disease.

Dr. Robert Fischell and his two sons are the named inventors, but Cordis has acquired all the rights to the patent.

The district court held a jury trial on the questions of infringement and invalidity. The jury found that Boston Scientific's accused stents literally infringed the '370 patent and that the patent was not invalid. The jury concluded, however, that under the reverse doctrine of equivalents Boston Scientific was not liable for the infringement. Both parties moved for judgment as a matter of law. The district court overturned the jury's verdict of literal infringement, denied Cordis's challenge to the jury's verdict on the reverse doctrine of equivalents as moot, and upheld the jury's verdict that the patent was not invalid. The district court also held a bench trial on the question of unenforceability, after which the court held the '370 patent unenforceable.

Cordis appeals from the portions of the judgment relating to literal infringement, the reverse doctrine of equivalents, and unenforceability. Because we remand for more specific findings on the issue of unenforceability, we decline to reach the issues of literal infringement and the reverse doctrine of equivalents. Boston Scientific cross-appeals from the portion of the judgment holding the '370 patent not invalid. We affirm that portion of the district court's judgment.

I

Cordis challenges the district court's conclusion that the patentees engaged in inequitable conduct during the prosecution of U.S. Patent No. 5,643,312 ("the '312 patent") that rendered the '370 patent unenforceable. The '370 patent issued from an application that was a continuation in part of the application that issued as the '312 patent. The inequitable conduct charge stems from the applicants' failure to cite a prior

art patent to Hillstead during the prosecution of the ’312 patent. The Hillstead reference first came to light when it was cited in a European search report in the spring of 1995. At that time, Dr. Fischell was handling the prosecution of the U.S. application himself, and his attorney, Morton Rosenberg, was handling the prosecution of a foreign counterpart application. The European search report was therefore sent to Mr. Rosenberg. That report identified four references, including Hillstead, as “particularly relevant if combined with another.” The report also listed a fifth reference as “particularly relevant if taken alone.” Mr. Rosenberg obtained copies of the five cited references, and in July 1995 he forwarded to Dr. Fischell a copy of the search report with the references attached.

Mr. Rosenberg took over the prosecution of the U.S. application in the spring of 1996. The Hillstead reference was never cited to the Patent and Trademark Office (“PTO”) during the prosecution of that application, which issued as the ’312 patent in July 1997. The continuation-in-part application that led to the ’370 patent was filed in May 1997. In May 1998, after discussions with Cordis regarding the Hillstead reference, Dr. Fischell filed an information disclosure in the prosecution of the ’370 patent that listed Hillstead along with 60 other references. The information disclosure did not highlight the potential relevance of Hillstead.

Although we agree with the district court that the Hillstead reference was material, we conclude that the district court’s findings of fact with respect to intent to deceive are not sufficiently specific to enable us to review the district court’s legal ruling on that issue. We therefore remand to the district court for supplemental findings on

several factual questions pertinent to the issue of inequitable conduct. See Purdue Pharma L.P. v. Endo Pharms. Inc., 438 F.3d 1123, 1135 (Fed. Cir. 2006).

A

Cordis first argues that the Hillstead reference was, at most, cumulative of a prior art patent to Inoue, which was disclosed to the examiner in the '312 patent prosecution, and therefore that the Hillstead reference was immaterial. In Cordis's view, the district court erred in finding that the Hillstead patent was the only prior art reference in the record that disclosed undulating longitudinal structures connecting the segments of the stent.[1] Cordis argues that the Inoue patent has undulating longitudinal structures and that the examiner's rejection of original claim 8 of the '312 patent as anticipated by Inoue verifies that fact. We disagree. Contrary to Cordis's argument, Dr. Fischell specifically distinguished Inoue by arguing that it lacked undulating longitudinal structures. With respect to amended claims 26 and 27, Dr. Fischell argued to the PTO that "neither Inoue nor any other prior art known to the Applicants teaches this specific undulating longitudinal structure."

In support of its immateriality argument, Cordis also points to the fact that the examiner eventually found the '370 patent to be patentable over Hillstead. However, that fact is not dispositive with respect to materiality. The test for materiality is whether

[1] Cordis also contends that the district court erred by finding that Dr. Fischell distinguished certain other prior art as not having "undulating longitudinals." However, the evidence of record supports the district court's finding in that regard. In the relevant portion of the prosecution history, Dr. Fischell explicitly distinguished three prior art references on the ground that "[n]one of these references provide for the undulating sections of each longitudinal." Dr. Fischell acknowledged that a fourth reference—the Lam reference—disclosed "undulating structures," but he went on to distinguish Lam on the ground that its undulating sections were not longitudinal structures.

"a reasonable examiner would have considered such prior art important in deciding whether to allow the parent application." Digital Control, Inc. v. Charles Mach. Works, 437 F.3d 1309, 1314-16 (Fed. Cir. 2006). Here, the district court concluded that Hillstead was the only reference that disclosed undulating longitudinal structures, a feature that was increasingly emphasized during the course of the prosecutions of the '312 and '370 patents. Indeed, the evidence showed that by May 1998 Dr. Fischell's and Cordis's patentability concerns focused on the Hillstead reference and its undulating longitudinal structures. Thus, the evidence of record supports the district court's conclusion that a reasonable examiner would have considered Hillstead important in deciding whether to allow the '312 patent.

B

Cordis also challenges the district court's conclusion with respect to intent to deceive. To be guilty of inequitable conduct

> one must have intended to act inequitably. Thus, one who alleges a "failure to disclose" form of inequitable conduct must offer clear and convincing proof of: (1) prior art or information that is material; (2) knowledge chargeable to applicant [or the attorney who prosecuted the application] of that prior art or information and of its materiality; and (3) failure of the applicant to disclose the art or information resulting from an intent to mislead the PTO.

FMC Corp. v. Manitowoc Co., 835 F.2d 1411, 1415 (Fed. Cir. 1987). In a case involving the omission of a material reference in the applicant's submissions to the PTO, there ordinarily must be "clear and convincing evidence that the applicant made a deliberate decision to withhold a known material reference." Digital Control, 437 F.3d at 1318, quoting Baxter Int'l, Inc. v. McGaw, Inc., 149 F.3d 1321, 1329 (Fed. Cir. 1998). An applicant therefore "must be chargeable with knowledge of the existence of the prior art

or information, for it is impossible to disclose the unknown." FMC Corp. v. Manitowoc Co., 835 F.2d at 1415.

Although as a general rule a party has no affirmative duty to search for relevant prior art, this court has stated that "one should not be able to cultivate ignorance, or disregard numerous warnings that material information or prior art may exist, merely to avoid actual knowledge of that information or prior art." FMC Corp. v. Hennessy Indus., Inc., 836 F.2d 521, 526 n.6 (Fed. Cir. 1987); see also Brasseler, U.S.A., I, L.P. v. Stryker Sales Corp., 267 F.3d 1370, 1380 (Fed. Cir. 2001) ("Where an applicant knows of information the materiality of which may so readily be determined, he or she cannot intentionally avoid learning of its materiality, even through gross negligence; in such cases the district court may find that the applicant should have known of the materiality of the information."). Thus, no duty to inquire arises unless the applicant or the prosecuting attorney "is on notice of the likelihood that specific, relevant, material information exists and should be disclosed." Brasseler, 267 F.3d at 1383. In such a case, the applicant or prosecuting attorney is not free to choose "not to investigate the facts necessary to determine the materiality of the [reference] in an effort to avoid complying with their duty to disclose." Id. at 1382.

In this case, Boston Scientific has advanced several alternative theories in support of its assertion that the Hillstead reference was withheld with deceptive intent. Its primary argument is that Dr. Fischell actually looked at the Hillstead reference in July 1995—and therefore learned that Hillstead contained undulating longitudinal structures—when Mr. Rosenberg sent him a copy of the reference. Alternatively, Boston Scientific argues, Mr. Rosenberg admitted that he at least "scanned" the

Hillstead reference in the summer of 1995. Therefore, according to Boston Scientific, Mr. Rosenberg had a duty to disclose the Hillstead reference because he must have known from the drawings in the Hillstead patent that it disclosed undulating longitudinal structures. Finally, Boston Scientific advances the theory that, even if Dr. Fischell did not actually look at the Hillstead reference in July 1995, the European search report put him on notice of the materiality of the Hillstead reference and he intentionally avoided learning of its contents. The district court's written opinion alludes to Boston Scientific's third theory, noting that the "patentees purposefully neglected their responsibility of candor to the PTO by 'putting their heads in the sand' regarding prior art."

It is unclear to us precisely what the district court has found with regard to Dr. Fischell's and Mr. Rosenberg's knowledge. In particular, we are uncertain whether the district court faulted Dr. Fischell merely for failing to conduct a prior art search, or whether the district court faulted Dr. Fischell for "cultivat[ing] ignorance" with respect to the Hillstead reference. FMC Corp. v. Hennessy Indus., Inc., 836 F.2d at 526 n.6. The district court stated in its opinion that "Dr. Fischell and Mr. Rosenberg testified that they did not look at the Hillstead patent until April 1998, despite both having copies of said reference in their respective files since at least July 1995." It is not clear, however, whether or to what extent the district court credited that testimony, or whether the court found the testimony not credible in light of other, contrary evidence at trial that could provide a basis for a finding of deceptive intent. Because the district court's factual findings are critical to the process of review of the inequitable conduct issue, we remand for the purpose of enabling the district court to provide more specific findings as to the state of knowledge of Dr. Fischell and Mr. Rosenberg.

The court should address whether, in addition to reading the July 1995 letter from Mr. Rosenberg, Dr. Fischell read the accompanying search report, which referred to various prior art patents, including the Hillstead patent, and whether Dr. Fischell read the Hillstead patent at that time. In this regard, the trial court's statement that "the patentees purposefully neglected their responsibility of candor to the PTO by 'putting their heads in the sand' regarding prior art" needs elaboration. In particular, the court should explain whether that statement embodies findings that Dr. Fischell knew of the Hillstead patent and, knowing that the Hillstead patent contained information that was likely material to the patentability of the '312 application, purposefully avoided obtaining knowledge of the details of that patent. The court should also determine whether its finding of inequitable conduct is based to any degree on the conduct of Mr. Rosenberg and, if so, what state of knowledge the court finds him to have had as to the existence and materiality of the Hillstead reference.

C

Even if the '312 patent was obtained by inequitable conduct, that conduct does not necessarily render the '370 patent unenforceable. Because there was no separate inequitable conduct found during the prosecution of the '370 patent, the '370 patent can be held unenforceable only if the inequitable conduct during the prosecution of the '312 patent tainted the prosecution of the '370 patent.

The principle that conduct pertaining to one patent can taint another patent can be traced back at least to the Supreme Court's decision in Keystone Driller Co. v. General Excavator Co., 290 U.S. 240 (1933). We have applied that principle in a variety of contexts. See, e.g., Agfa Corp. v. Creo Prods. Inc., No. 05-1079, slip op. at

20 (Fed. Cir. June 26, 2006) (continuation patent unenforceable based on inequitable conduct found in the prosecution of the parent application); Consol. Aluminum Corp. v. Foseco Int'l Ltd., 910 F.2d 804, 812 (Fed. Cir. 1990) ("Consolidated's concealment of the [best mode] from the '917 patent permeated the prosecution of the other patents-in-suit [which descended from the '917 patent] and renders them unenforceable."); Driscoll v. Cebalo, 731 F.2d 878, 885 (Fed. Cir. 1984) (an applicant who "has withheld from the PTO prior art material to a claim in a parent application should not be exculpated simply because, by fortuitous circumstances, the PTO has not reached the stage of allowing claims in a continuing application."). The relevant inquiry is whether the "inequitable conduct in prosecuting the [parent] patent had immediate and necessary relation to the . . . enforcement of the [child] patents." Consol. Aluminum, 910 F.2d at 810-11.[2]

On this issue, as on the question of intent, our reviewing process would benefit from further elaboration of the district court's findings. In the portion of its opinion addressing inequitable conduct, the district court made the following statements regarding the taint issue:

> [T]he submission to the PTO of the Hillstead patent during the '370 patent prosecution has no bearing on whether the '312 patentees acted with deceptive intent during the '312 prosecution. The court finds that the '370 prosecution is tainted by the lack of candor exhibited during the '312 prosecution, since the Hillstead patent was submitted along with sixty other references and never addressed by the patentees.

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[2] This court's statement in Pharmacia Corp. v. Par Pharmaceutical, Inc., 417 F.3d 1369, 1375 (Fed. Cir. 2005), that "this court's inequitable conduct cases do not extend inequitable conduct in one patent to another patent that was not acquired through culpable conduct" does not undermine the principle established in Keystone Driller. In light of its context, we interpret that statement as standing for the proposition that related patents do not necessarily rise and fall together, not for the proposition that inequitable conduct in the prosecution of one patent can never taint a separate patent.

Although the district court stated that the inequitable conduct in connection with the ’312 patent tainted the ’370 patent, the court did not explain how the earlier inequitable conduct affected the later prosecution, other than to suggest that the effect of the earlier inequitable conduct was not purged, because the Hillstead reference was “never addressed by the patentees” and because it was disclosed in the second prosecution “along with sixty other references.” On remand, the court should specify its reasoning in sufficient detail to make clear the grounds for its conclusion that the nondisclosure in connection with the ’312 patent prosecution carried over to the ’370 prosecution. In so doing, the court should address the parties’ arguments as to whether the disclosure of the Hillstead patent “cured” any inequitable conduct in the ’312 prosecution, or whether, in light of the context in which the Hillstead patent was disclosed and the applicant’s characterization of the prior art, that disclosure failed to cure the taint. See Rohm & Haas Co. v. Crystal Chem. Co., 722 F.2d 1556, 1572-73 (Fed. Cir. 1983).

II

In its cross-appeal, Boston Scientific argues that claim 25 of the ’370 patent, which was added as an amendment during prosecution, is invalid for lack of a sufficient written description. Boston Scientific contends that, although claim 25 is broadly directed to using undulating longitudinal structures without reference to any particular type of stent, the ’370 patent discloses only the use of ring stents and teaches away from using stents not made of rings. In support of its argument, Boston Scientific primarily relies on Tronzo v. Biomet, Inc., 156 F.3d 1154 (Fed. Cir. 1998). We disagree

with Boston Scientific's argument on the written description issue, and we uphold the jury's verdict that claim 25 is not invalid.

Boston Scientific views the written description issue in this case as indistinguishable from the issue we faced in Tronzo. The patent at issue in Tronzo pertained to an artificial hip socket that included cup implants. The specification described the cups as "conical" in shape. The only references in the specification to other shapes were references to prior art that the patent distinguished as inferior. Moreover, the specification touted the conical shape as a key feature of the invention. See Tronzo, 156 F.3d at 1159 ("Another extremely important aspect of the present device resides in the configuration of the acetabular cup as a trapezoid or a portion of a truncated cone."). We noted that "[s]uch statements make clear that the '589 patent discloses only conical shaped cups and nothing broader." Id. Because we concluded that nothing in the patent's specification "suggest[ed] that shapes other than conical are necessarily a part of the disclosure," we held that the written description was insufficient to support amended claims that were directed broadly to generically shaped cups. Id.

We see critical differences between this case and Tronzo. Because the written description in Tronzo did not expressly disclose non-conical shaped cups, the question was whether a person of ordinary skill in the art would understand the patent to disclose non-conical shaped cups. In the present case, there is no doubt that the '370 patent discloses undulating longitudinal sections (touted for their ability to enhance stent flexibility) and ring shaped stent structures (touted for their ability to enhance stent strength). See '370 patent, col. 1, ll. 56-58 ("[A]n object of this invention is to provide a stent having maximum hoop strength by the employment of closed, generally circular

structures which are in fact rings."); id. at col. 3, ll. 46-50 ("A stent such as stent 10 could have two or more undulating longitudinals. Such a stent would bend more easily during insertion into a vessel and would be more readily adaptable for placement in curved vessels such as some coronary arteries."). Thus, the written description dispute in this case boils down to whether the disclosure supports the use of undulating longitudinal structures in conjunction with stents that are not made of ring-shaped structures.

We have held that when a patent includes two inventive components, particular claims may be directed to one of those inventive components and not to the other. See, e.g., Resonate Inc. v. Alteon Websystems, Inc., 338 F.3d 1360, 1367 (Fed. Cir. 2003) ("[W]hen the written description sets out two different problems present in the prior art, is it necessary that the invention claimed, and thus each and every claim in the patent, address both problems? We conclude that on the record in this case, the answer is no."); Honeywell Inc. v. Victor Co. of Japan, Ltd., 298 F.3d 1317, 1326 (Fed. Cir. 2002) ("The fact that the patentee chose to include language in claim 1 relating to only one of the two cited prior art problems is persuasive evidence that the claim does not require the solution of both problems."). In this case, nothing in the patent suggests that the benefits of undulating sections are tied in any way to ring stents. To the contrary, Cordis's expert testified that the undulating longitudinal structures disclosed in the '370 patent could "clearly" be used in conjunction with non-ring stents. Although such an embodiment would lack the strength-enhancing characteristics of ring stents, the undulating longitudinal structures would still enhance the stent's flexibility, as disclosed in the patent's specification. In light of the disclosure in the specification and the

unrebutted testimony from Cordis's expert, we hold that the jury's conclusion that the written description requirement was satisfied is supported by substantial evidence. We therefore affirm the district court's denial of Boston Scientific's motion for JMOL on the written description issue.

Each party shall bear its own costs for this appeal.