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United States Court of Appeals for the Federal Circuit

00-1216

ALTECH CONTROLS CORPORATION and RICHARD ALSENZ,

Plaintiffs-Appellants,

v.

EIL INSTRUMENTS, INC.,

Defendant-Appellee.

DECIDED: May 2, 2001

Before CLEVENGER, SCHALL, and BRYSON, Circuit Judges.

SCHALL, Circuit Judge.

DECISION

Altech Controls Corporation and Richard Alsenz (collectively, "Altech") sued EIL Instruments, Inc. ("EIL") in the United States District Court for the Southern District of Texas for infringement of United States Patent Nos. 4,621,776, (the " '776 patent"), 4,628,700 (the " '700 patent"), and 5,067,326 (the " '326 patent"). Mr. Alsenz is the inventor of the devices disclosed in the patents and Altech is the assignee of the patents. The patents relate to controllers used in supermarket refrigeration systems. The devices accused of infringement were EIL's RC-48, RC-1000, and RC-2000 controllers. EIL produced the RC-48 controller until 1988 and continues to produce the RC-1000 controller. After summary judgment proceedings, a jury trial on infringement, and consideration of JMOL motions, the district court entered judgment in favor of EIL on Altech's claims of infringement and on the affirmative defenses of equitable estoppel, laches, and invalidity raised by EIL. We affirm-in-part, reverse-in-part, and remand.

DISCUSSION

I. The '776 Patent

The '776 patent discloses a method and apparatus for controlling a multi-compressor refrigeration system. The compressors control the pressure of the system in order to maintain a constant temperature inside the refrigerator despite the inflow and outflow of large quantities of food and the repeated opening and closing of the refrigerator doors. Before the invention of the '776 patent, each compressor in a refrigeration system typically had its own controller. Each compressor would have an operating pressure range so that the compressors in the system would turn on or off in sequence as more or less pressure was needed to maintain a constant temperature in the display case. These systems were inefficient because the pressure ranges varied widely from compressor to compressor. Additionally, because the compressors turned on or off in sequence, the first compressor in the series received much more wear than the remaining compressors in the system.

The invention of the '776 patent seeks to address these problems with a single controller for multiple compressors in a refrigeration system. The controller controls all the compressors using a single pressure range to minimize energy consumption. The upper pressure setpoint is referred to as the "cut-in setpoint." When the actual pressure exceeds the cut-in setpoint for a predetermined period, the controller adds compressors to meet the increasing refrigeration load. The lower pressure setpoint is referred to as the "cut-out setpoint." When the actual pressure falls below that point for a predetermined period, the controller decreases compressor capacity to meet the decreasing refrigeration load.

An important feature of the '776 patent's invention is the controller's ability to select a combination of compressors in a first-in-first-out ("FIFO") sequence to minimize wear on each compressor. For example, when a system receives a signal to decrease capacity, it shuts down the compressor that has been on the longest. Similarly, when the system needs to increase capacity, it turns on the compressor that has been off the longest. Thus, wear is spread evenly across the different compressors in the system.

A. Equitable Estoppel

In response to Altech's filing a claim of infringement of the '776 patent, EIL asserted the affirmative defense of equitable estoppel, claiming that Altech misled it into believing that it would not be sued for infringement. To prove equitable estoppel, EIL must show that (1) Altech communicated in a misleading way that it would not sue EIL; (2) EIL substantially relied on the

misleading conduct to its detriment; and (3) EIL would be materially prejudiced if the suit were allowed. A.C. Auckerman Co. v. R.L. Chaides Constr. Co., 960 F.2d 1020, 1042-43, 22 U.S.P.Q.2d 1321, 1335-36 (Fed. Cir. 1992) (en banc). We review a district court's finding of equitable estoppel for abuse of discretion. Id. at 1041, 22 U.S.P.Q.2d at 1335.

The district court found evidence of misleading conduct on the basis of a 1987 meeting between Mr. Alsenz and Sam Woodside, the President and chief executive officer of EIL, and a letter Mr. Woodside sent to Mr. Alsenz confirming the events of the meeting. The district court found that, at the meeting, Mr. Alsenz and Mr. Woodside discussed a possible merger of Altech and EIL, that Mr. Alsenz complained of another company copying his products, and that Mr. Alsenz led Mr. Woodside to believe that Altech would not assert its patents against EIL because the two companies' products occupied different market segments. The district court found that the letter, dated July 1, 1987, confirmed Mr. Woodside's testimony that he believed Altech would not enforce any patent rights against EIL, even though the letter did not refer to Altech's patents and made no mention of potential litigation between the two parties.

We do not agree that these facts rise to the level of misleading conduct. To begin with, Mr. Woodside could not remember whether the topic of patents was discussed at all during the meeting. Furthermore, his follow-up letter did not mention any patent-related conversation. Indeed, he testified that he was not fully convinced that Altech even had patents at the time of the meeting. The fact that Mr. Alsenz stated that he believed EIL developed products for a different market segment than Altech is not sufficient to estop Altech from asserting its patent rights. Similarly, the fact that Mr. Alsenz expressed concern about another company's possible infringement does not estop Altech from asserting its patent rights against EIL. In the absence of a clearer indication of misleading conduct, the district court abused its discretion in finding estoppel with respect to the '776 patent. See Auckerman, 960 F.2d at 1043-44, 22 USPQ2d at 1337. ("[O]n summary judgment, such inference [of misleading conduct] must be the only possible inference from the evidence.").

B. Laches

The district court also ruled in EIL's favor on its affirmative defense of laches. Laches requires proof that the patentee unreasonably and inexcusably delayed filing suit and that the delay resulted in material prejudice to the defendant. Wanlass v. General Electric Co., 148 F.3d 1334, 1337, 46 U.S.P.Q.2d 1915, 1917 (Fed. Cir. 1998). The length of time which may be deemed unreasonable has no fixed boundaries, but rather depends on the circumstances of the case. Auckerman, 960 F.2d at 1032, 22 U.S.P.Q.2d at 1330. A presumption of laches arises if the patentee delays bringing suit for more than six years after actual or constructive knowledge of the defendant's infringing activity. Id. at 1035-36, 22 U.S.P.Q.2d at 1332. Once a presumption of laches arises, the patentee may offer proof directed to rebutting the laches factors. Such evidence may be directed to showing either that the patentee's delay was reasonable or that the defendant suffered no prejudice. At all times, however, the ultimate burden of persuasion with respect to the laches defense remains with the defendant. Id. at 1038-39, 22U.S.P.Q.2d at 1332. The laches period begins to run when the patentee has actual or constructive knowledge of the infringer's activity, but not prior to the issuance of the patent. Id. at 1032, 22 U.S.P.Q.2d at 1330. We review a district court's finding of laches for abuse of discretion. Id.

The '776 patent issued more than six years before Altech brought suit for infringement on October 15, 1992. The district court found that Altech was aware of EIL's activities when the

patent issued and that, therefore, a presumption of laches applied. The only evidence that Altech presented to support its contention that the delay in bringing suit was reasonable and excusable was evidence that, during the relevant period of time, it was involved in litigation with third parties involving the same patents and could not afford the expense of an additional legal action. The district court determined that the other litigation did not excuse Altech's failure to notify EIL within the six years of an intent to sue when funds became available. The district court also determined that the delay prejudiced EIL because EIL invested heavily in its RC-48 and RC-1000 controller technology.

We agree that, as far as the RC-48 controller is concerned, Altech did not meet its burden of rebutting the laches factors of unreasonable delay and prejudice. However, we hold that laches applies only to the RC-48 controller because only the RC-48 controller was in existence at the time the '776 patent issued. EIL only began to produce the RC-1000 series in late 1988, within four years of the date Altech filed suit, and did not present evidence that the four-year delay in bringing suit was unreasonable and inexcusable. Therefore, no presumption of laches applies with respect to the RC-1000 controller.

C. Infringement

Because laches bars any claim with respect to the RC-48 controller, the only issue we must address is infringement of the RC-1000 controller. After holding a Markman hearing to construe the '776 patent's claims, the district court granted summary judgment that the RC-1000 controller did not infringe claims 1, 2, 3, 7, and 24 of the '776 patent literally. The court thereafter issued a second order that granted summary judgment that prosecution history estoppel barred an assertion of infringement of the '776 patent by the RC-1000 under the doctrine of equivalents. The district court concluded that the patent claims were limited to FIFO selection. There is little dispute that the RC-1000 does not utilize FIFO selection as described by the '776 patent, and instead uses a single signal to both de-energize some compressors and at the same time energize others to obtain the desired capacity. In contrast, FIFO selection uses a decrease signal only to de-energize compressors, and it uses an increase signal only to energize compressors. The district court therefore held that the RC-1000 did not infringe the '776 patent.

While Altech argues that the FIFO selection process is not a claim limitation, but a feature of the preferred embodiment of the '776 patent, we agree with the district court that the '776 patent's claims do not read on the RC-1000 controller. Claim 1 of the '776 patent discloses a method of controlling a compressor system by:

selectively energizing and deenergizing compressors in response to the respective increase capacity signals and the decrease capacity signals to provide a combination of energized unequal capacity compressors that exceeds in number the preselected number of compressors in the system so that the capacity of the system matches the common pressure load.

The '776 patent, col. 9, ll. 19-26. Altech argued that, while other claims in the '776 patent were directed to a FIFO invention, claim 1, as well as claims 2, 3, 7, and 24, were broad enough to encompass the RC-1000 selection process. However, both the language of the claims and the prosecution history indicate that the claims are limited to a FIFO system. During prosecution of

the patent Altech made express representations that the claims were limited to a FIFO system. In addition, Altech repeatedly referred to its invention as utilizing FIFO selection, without any reference to specific claims.

Furthermore, application claim 7, which issued as claim 1 of the '776 patent, was originally written broadly enough to encompass the technology of the RC-1000 controller. However, the claim was rejected over the prior art. Altech amended the claim to include the words "selectively energizing" and "respective." The word "respective" effectively limits the claims by aligning an "increase" signal with an increase capacity response, and a "decrease" signal with a decrease capacity response. This interpretation is reinforced by the term "selectively energizing." The amended claims do not allow for a construction where each signal generates a response that turns on the specific combination of compressors that matches the load of demand, the selection process of the RC-1000. Given that the amendments narrowed the claims and were for reasons related to patentability, Altech is barred from asserting infringement of claim 1 and dependent claim 2 under the doctrine of equivalents. See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., 234 F.3d 558, 574-75, 56 U.S.P.Q.2d 1865, 1872 (Fed. Cir. 2000) (en banc). Similarly, because the parallel language of claims 3, 7, and 24 was likewise amended, Altech is barred from asserting infringement of those claims under the doctrine of equivalents.

D. JMOL on the On-Sale Bar Issue

EIL asserted the affirmative defense that claim 24 of the '776 patent was invalid because the subject matter of the claim was offered for sale more than one year before the application for the patent was filed. Under 35 U.S.C. § 102(b), an invention on sale more than one year before the patent application's filing date is not entitled to patent protection. In Pfaff v. Wells Electronics, Inc., 525 U.S. 55, 48 U.S.P.Q.2d 1641 (1998), the Supreme Court applied the on-sale bar when, more than one year before the critical date, (1) a product embodying the patented invention was offered for commercial sale, and (2) the invention was ready for patenting. Id. at 67, 48 U.S.P.Q.2d at 1646-67. The jury found that EIL had failed to prove by clear and convincing evidence that the complete subject matter of claim 24 of the '776 patent was embodied in a controller offered for sale before the critical date of July 31, 1978. The district court, however, relying on two written letters and the corroborating testimony of witnesses, granted EIL's JMOL motion, finding that Altech had offered a controller embodying the limitations of claim 24 of the '776 patent for sale before the critical date, thereby invalidating the claim.

We review without deference a district court's grant of JMOL under Federal Rule of Civil Procedure 50. Borroughs Wellcome Co. v. Barr Lab. Inc., 40 F.3d 1223, 1227, 32 U.S.P.Q.2d 1915, 1919 (Fed. Cir. 1994). On appeal, we apply the same standard as the district court and affirm the grant of JMOL if substantial evidence does not support the jury's factual findings or if those factual findings do not support the jury's legal conclusions. Id. Here, however, we reverse the district court's grant of JMOL because we find that substantial evidence exists to support the jury's conclusion that no on-sale bar applies to claim 24 of the '776 patent. EIL did not prove by clear and convincing evidence that the invention of claim 24 was ready for patenting at the time of the offer for sale. See Sonoscan, Inc. v. Sonotek, Inc., 936 F.2d 1261, 1263, 19 USPQ2d 1156, 1158 (Fed. Cir. 1991). ("The facts concerning an 'on sale' defense must be proved by clear and convincing evidence.").

The jury's decision, finding implicitly that the Altech controller embodied in claim 24 of the '776

patent was not ready for patenting at the critical date, is supported by substantial evidence. Although Don Bendekson, a former Altech sales representative, testified that the controllers offered for sale prior to the critical date had the features of claim 24 of the '776 patent, the jury was free to disbelieve him, especially in light of the fact that Mr. Bendekson himself was involved in litigation against Altech. Additionally, Ken Moskowitz, another sales representative, testified that he was uncertain whether he had offered an Altech controller for sale or an earlier model that Mr. Alsenz was testing at Weingarten supermarkets. Furthermore, Mr. Alsenz and Charles Cuin, a service and installation manager for Altech, testified that the controllers installed at Weingarten supermarkets were not operable sufficiently to be considered ready for patenting. Altech claims that the product Mr. Bendekson and Mr. Moskowitz were offering was not the product covered by the claims. Rather, the offers described a new product in the development stage. Based on this substantial evidence supporting the jury's verdict, we reverse the grant of JMOL.

E. JMOL of Obviousness

EIL asserted that claim 24 of the '776 patent was also invalid as obvious. Despite a jury verdict finding the claim valid and non-obvious, the district court granted EIL's motion for JMOL. The court found that claim 24 was obvious in light of prior art because the patent examiner had rejected a different claim, application claim 23, as obvious, and application claim 23 had all the limitations of issued claim 24 with one small difference. The "time delay means" of application claim 23 was replaced with a "timing circuit" in issued claim 24. EIL witnesses testified that timing circuits were well known in the prior art at the time.

Despite the district court's ultimate finding of obviousness, the court also noted that Altech's witnesses testified that, although the limitations of claim 24 were well known in the art, the idea to combine the limitations was not obvious. As a matter of fact, the court noted that the jury heard testimony describing the prior art as pointing away from the combination of limitations in claim 24. Furthermore, Altech presented substantial evidence of secondary considerations, see Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 17-18, 148 U.S.P.Q. 459, 467 (1966), in the form of commercial success and praise from others in the industry, indicating that the invention was not obvious in light of the prior art. In light of the above, we reverse the grant of JMOL and find that substantial evidence supports the jury's verdict that claim 24 is valid and non-obvious.

In summary, Altech is entitled to no recovery under the '776 patent. Laches bars recovery of any possible infringement by the RC-48 controller. Furthermore, because the '776 patent's claims are directed to FIFO selection, there is no infringement by the RC-1000 controller. However, claim 24 of the '776 patent is not invalid for reasons of obviousness or the on-sale bar.

II.

The '700 Patent

The '700 patent discloses a method and apparatus for optimizing the cut-in and cut-out setpoints in response to the temperature in a refrigerated display case. Because the multi compressor system has more than one evaporator coil, the cut-in and cut-out points need to be adjusted in order to accommodate areas of the refrigerator with slightly varying temperatures. Adjusting the setpoints enables the system to use the least amount of power to

maintain the overall desired temperature, thereby increasing the energy efficiency of the system.

A. Equitable Estoppel

EIL asserted an equitable estoppel affirmative defense against the charge of infringement of the '700 patent, based on the same set of circumstances as the estoppel defense asserted with respect to the '776 patent, the 1987 meeting between Mr. Alsenz and Mr. Woodside. The district court found that Mr. Alsenz was guilty of misleading conduct at that meeting and therefore determined that Altech was estopped from bringing a claim based on infringement of the '700 patent. Because we hold that Mr. Alsenz's statements did not rise to the level of misleading conduct for the reasons stated in section I.A above, we hold that equitable estoppel does not apply with respect to the '700 patent.

B. Laches

EIL also asserted a laches defense against Altech's claim of infringement of the '700 patent. The laches period with respect to the '700 patent began to run on December 16, 1986, when the patent issued. As noted above, suit was brought on October 15, 1992. As in the case of the '776 patent, laches does not apply with respect to the RC-1000 controller, because the suit was filed within four years of EIL's production of the controller, and EIL did not meet its burden of showing why the passage of four years amounted to unreasonable and inexcusable delay.

The more difficult question is whether laches applies with respect to the RC-48 controller. The delay in filing suit was five years and ten months, only two months shy of the six-year presumptive period. EIL presented evidence of evidentiary prejudice because it has a policy of shredding invoices after five years. See Wanlass, 148 F.3d at 1340, 46 U.S.P.Q.2d at 1920 (applying laches on the basis of evidentiary prejudice where the company destroyed models of the accused device pursuant to a company destruction policy.) In addition, EIL presented evidence of economic prejudice, in that, during the relevant period, the company underwent significant financial restructuring, specifically, the transformation from a public to a private company and the incurrence of substantial debt. In the district court, EIL contended that the changes would have been structured differently had it been aware of a potential lawsuit by Altech. See Auckerman, 960 F.2d at 1033, 22 U.S.P.Q.2d at 1329 (noting that courts must look for a change in the economic position of the accused infringer to find prejudice and that "economic prejudice is not a simple but rather is likely to be a slippery issue to resolve."). Given the lengthy period of delay on the part of Altech, in view of the evidence recited above, we are not prepared to say that the district court abused its discretion in finding laches with respect to the RC-48 controller.

C. Infringement

Prior to trial, the district court granted EIL's motion for summary judgment that the RC-1000 device did not infringe claims 9, 10 and 14 of the '700 patent. This ruling was correct because, like the disputed claims of the '776 patent, these claims are limited to FIFO selection by their language as well as by the prosecution history. For example, claim 9 of the '700 patent discloses "a selection means for receiving said increase capacity signals and in response thereto, selectively energizing and deenergizing said compressors." As in the '776 patent, this language refers to a FIFO selection process. Furthermore, the '700 patent shares a common prosecution history with the '776 patent, and the express statements of Mr. Alsenz limiting his

invention to FIFO selection apply to the '700 invention as well. Therefore, the RC-1000 does not infringe claims 9, 10, and 14 of the '700 patent. Because we affirm the judgment of non-infringement of the RC-1000 controller and laches bars a claim for infringement with respect to the RC-48 controller, Altech is not entitled to recovery under the '700 patent.

III.

The '326 Patent

The '326 patent discloses a controller that adjusts the speed of a compressor motor in response to the oil pressure of the motor's lubrication system in order to decrease the damage that insufficient oil pressure causes to compressors. The patent issued on November 21, 1991. A claim of infringement of the '326 patent by the RC-1000 controller was added to the suit in December of 1993, a little over two years after the date of issuance. Equitable estoppel does not apply to the '326 patent for the same reason that it does not apply to the '776 and '700 patents – there was no misleading conduct on the part of Altech. Significantly, the '326 patent had not issued at the time the 1987 meeting between Mr. Alsenz and Mr. Woodside took place. Moreover, laches does not apply with respect to the RC-1000 controller, because only two years passed between issuance of the '326 patent and the filing of the infringement claim. Additionally, the district court did not explain its determination as to why laches applied to the '326 patent other than to say that EIL met its burden of proof in establishing a defense of laches as to all three disputed patents. Without some explanation as to how EIL met its burden of proof, we cannot affirm the district court's decision. Because EIL conceded infringement of the '326 patent by the RC-1000, we reverse and remand for a determination of damages for infringement.

CONCLUSION

In sum, while we hold that Altech is not estopped from asserting claims of infringement against EIL, we affirm the district court's ruling that Altech's claims of infringement of the '776 patent by the RC-48 controller are barred by laches. We also affirm the court's grant of summary judgment that the RC-1000 controller does not infringe the '776 patent. However, we reverse the court's grant of JMOL and hold that claim 24 of the '776 is not invalid for reasons of obviousness or the on-sale bar.

We affirm the district court's determination that laches bars Altech's claim of infringement of the '700 patent by the RC-48 controller. We also affirm the court's grant of summary judgment of non-infringement of the RC-1000 controller. We therefore hold that Altech is not entitled to recovery under the '700 patent.

We reverse the district court's finding that laches bars Altech's claims of infringement of the '326 patent by the RC-1000 controller. Because EIL conceded infringement of the '326 patent by the RC-1000 controller, we remand for a determination of damages.

For the foregoing reasons, the decision of the district court is affirmed-in-part, and reversed-in-part. The case is remanded for further proceedings in accordance with this opinion.

Each party shall bear its own costs.

FOOTNOTES:

[1] In the district court, the parties agreed that for purposes of the case, the RC-1000 and RC-2000 controllers were indistinguishable. Accordingly, in this opinion, we simply refer to the "RC-1000 controller."

[2] Laches is a defense to a continuing tort up until the time of suit and can only bar recovery until that time. Auckerman, 960 F.2d at 1031, 22 U.S.P.Q.2d at 1327. In this case, EIL stopped manufacturing the RC-48 controller before suit was filed. Therefore, laches bars recovery for all acts of potential infringement by the RC-48 controller.

[3] Claims 1, 3 and 24 are independent claims. Claims 2 and 7 are dependent claims.

[4] For example, in FIFO selection, if a system has three compressors of 4, 2 and 1 horsepower and is running the first two compressors, the system will be running at six horsepower. If the pressure indicates that the system requires only five horsepower, a de-energize signal will cause the controller that has been running the longest to turn off. In our example, that would be the 4 horsepower compressor. The system will be running at only 2 horsepower and an energize signal will indicate that more power is needed. In response, the 1 horsepower compressor will turn on, because that has been off the longest. Now the system is running at 3 horsepower. Another energize signal will indicate that more power is needed, and the 4 horsepower compressor will turn on, for a total of seven. Now, the de-energize signal will cause the 2 horsepower compressor to turn off, because that compressor has been on the longest and finally, the system will be running at the necessary five horsepower. In contrast, the RC-1000 controllers do not utilize FIFO selection. Instead, in our example where the system is running the 4 and 2 horsepower compressors, but needs only five horsepower, the RC-1000 controller will respond to the de-energize signal by turning off the 2 compressor and turning on the 1 compressor, for a total of five horsepower. The RC-1000 responds to de-energize and energize signals without regard for which compressors have been on or off for the longest period of time.

[5] The '776 patent resulted from Patent Application No. 257,113, which was filed on April 24, 1981. Application No. 257,113 was a continuation of abandoned Patent Application No. 062,525, which was filed on July 31, 1979, hence the July 31, 1978 critical date.