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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JAMES ALFRED THOMPSON

Appeal 2011-011620
Application 10/656,687
Technology Center 2400

Before JAMES T. MOORE, JOHN A. JEFFERY, and ERIC B. CHEN,
Administrative Patent Judges.

JEFFERY, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's decision to reject claims 1, 3-15, 18, 19, 21-27, and 30-39. Claims 2, 16, 17, 20, 28, and 29 have been cancelled. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

STATEMENT OF THE CASE

Appellant's invention is a cable distribution box that includes an authentication device, electronic access control system, and lock that electronically unlocks the box when access to the box is granted. *See generally* Spec. ¶¶ 0004-07. Claim 1 is illustrative:

1. A cable distribution box, comprising:

an authentication device configured to obtain authentication information from an authentication medium;

an electronic access control system configured to be operatively connected to an access administration system over at least a portion of a cable network infrastructure, wherein the electronic access control system is configured to grant access to the cable distribution box upon receiving verification of the authentication information, and

a lock operatively connected to the electronic access control system, wherein the lock is configured to receive a signal from the electronic access control system to electronically unlock the cable distribution box when access to the cable distribution box is granted,

wherein the authentication device, the electronic access control system, and the lock are configured to be solely powered using current obtained from a coaxial cable line operatively connected to the cable distribution box.

THE REJECTIONS

The Examiner rejected claims 1, 3-7, 9, 10, 12, 13, 15, 18, 30, 33, and 35-39 under 35 U.S.C. § 103(a) as obvious over Wheeler (US 2004/0128508 A1; published July 1, 2004; PCT filed Aug. 6, 2001), Christatos (US 4,502,609; issued Mar. 5, 1985), Vitale (US 7,111,318 B2; issued Sept. 19, 2006; filed June 1, 2001), and Kamiya (US 6,785,908 B1; issued Aug. 31, 2004; filed Dec. 2, 1999). Ans. 4-17.¹

The Examiner rejected claims 19, 21-23, 25, and 26 under 35 U.S.C. § 103(a) as obvious over Wheeler, Christatos, and Kamiya. Ans. 18-20.

¹ Throughout this opinion, we refer to (1) the Appeal Brief filed February 1, 2011 (“App. Br.”); (2) the Examiner’s Answer mailed April 1, 2011 (“Ans.”); and (3) the Reply Brief filed June 1, 2011 (“Reply Br.”).

The Examiner rejected claim 8 under 35 U.S.C. § 103(a) as obvious over Wheeler, Christatos, Vitale, Kamiya, and Harold (US 6,472,973 B1; issued Oct. 29, 2002). Ans. 20-21.

The Examiner rejected claims 11, 24, 31, and 32 under 35 U.S.C. § 103(a) as obvious over Wheeler, Christatos, Vitale, Kamiya, and Naidoo (US 2002/0147982 A1; published Oct. 10, 2002). Ans. 21-23.

The Examiner rejected claims 14, 27, and 34 under 35 U.S.C. § 103(a) as obvious over Wheeler, Christatos, Vitale, Kamiya, and Rowe (US 2004/0050930 A1; published Mar. 18, 2004; filed Sept. 17, 2002). Ans. 24-25.

THE OBVIOUSNESS REJECTION OVER WHEELER, CHRISTATOS, VITALE, AND KAMIYA

The Examiner finds that Wheeler discloses (1) an authentication device that obtains authentication information; (2) an electronic access control system that grants access to a “restricted area” upon receiving verification of the authentication information, and (3) a lock connected to this control system that electronically unlocks the restricted area when access is granted. Ans. 4-5. Although the Examiner acknowledges that Wheeler’s restricted area is not a cable distribution box with a locking device, the Examiner cites Christatos for this feature. Ans. 5. The Examiner also acknowledges that Wheeler and Christatos do not (1) establish a connection with a remote system over cable network infrastructure, nor (2) power the authentication device, control system, and lock solely using currently obtained from a coaxial cable line connected to the cable distribution box. Ans. 5-6. The Examiner, however, cites Vitale and

Kamiya for teaching these respective features in concluding that the claim would have been obvious. *Id.*

Appellant does not dispute these particular findings, but rather argues that the Examiner failed to properly weigh Appellant's evidence of secondary considerations of non-obviousness, namely regarding long-felt need and failure of others, that is said to rebut the Examiner's obviousness conclusion. App. Br. 9-19; Reply Br. 3-4. According to Appellant, the Examiner not only failed to properly consider the probative value of four declarations from subject matter experts evidencing a long-felt need and failure of others, but also failed to properly establish that this rebuttal evidence is insufficient. *Id.* Appellant emphasizes that the pertinent problem solved by the claimed invention is not preventing cable theft as the Examiner asserts, but rather cable theft in Legacy Cable Distribution Boxes that use keyed locks as a mechanism to secure those boxes. Reply Br. 3-4.

ISSUE

Under § 103, has the Examiner erred in rejecting claim 1 as obvious over Wheeler, Christatos, Vitale, and Kamiya despite evidence of secondary considerations of non-obviousness, namely long-felt but unsolved need and failure of others?

ANALYSIS

We begin by noting that the Examiner's particular findings from the four prior art references cited to reject claim 1 are undisputed, as is their combinability. Rather, this dispute turns solely on whether that rejection is erroneous in view of additional countervailing evidence of long-felt need

and failure of others in form of declarations submitted by four subject matter experts, namely (1) Robert Shugarman and Robert V. Moel, both of whom are regional vice presidents with Time Warner Cable; (2) Terry L. Paul, a Loss Prevention & Quality Assurance Supervisor from Cox Communications, Inc.; and (3) James A. Wolsiffer, Director of Technical Operations of Buckeye CableSystem. Evid. App'x.

Despite considering these declarations, the Examiner concludes that the claimed invention would have nevertheless been obvious because it merely improves on a solution to a problem that has already been solved before Appellant's invention, namely preventing cable theft as in Christatos. Ans. 27-28. As such, the Examiner reasons, there is no long-felt theft-prevention need to satisfy. *Id.*

We find this reasoning somewhat problematic. In determining obviousness of the claimed invention, objective evidence of secondary considerations pertaining to nonobviousness must be considered, including long-felt but unsolved needs, and failure of others. *In re Huang*, 100 F.3d 135, 139 (Fed. Cir. 1996) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966)). "If rebuttal evidence of adequate weight is produced, the holding of *prima facie* obviousness . . . is dissipated. Regardless of whether the *prima facie* case could have been characterized as strong or weak, the examiner must consider all of the evidence anew." *In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984).

While evidence of secondary considerations must be considered and "may often be the most probative and cogent evidence in the record," *Pentec, Inc. v. Graphic Controls Corp.*, 776 F.2d 309, 315 (Fed. Cir. 1985), it does not, however, control the obviousness conclusion. *Newell Cos., Inc.*,

v. Kenney Mfg. Co., 864 F.2d 757, 768 (Fed. Cir. 1988). Indeed, a strong case of obviousness cannot be overcome by a far weaker showing of objective indicia of nonobviousness. *Tokai Corp. v. Easton Enter., Inc.*, 632 F.3d 1358, 1371 (Fed. Cir. 2011).

Nevertheless, “[o]bjective indicia of nonobviousness play a critical role in the obviousness analysis.” *Leo Pharm. Products, Ltd. v. Rea*, 726 F.3d 1346, 1358 (Fed. Cir. 2013). These indicia are not just a cumulative or confirmatory part of the obviousness analysis, but rather constitute independent evidence of nonobviousness that can be the most probative evidence in that regard “in avoiding the trap of hindsight when reviewing, what otherwise seems like, a combination of known elements.” *Id.*

Here, the question before us is whether the Examiner erred in concluding that claim 1 would have been obvious in light of Appellant’s evidence of long-felt but unsolved need and failure of others considered with the other evidence of record. To establish a long-felt need, three elements must be proven. First, the need must have been a persistent one that was recognized by ordinarily skilled artisans. *In re Gershon*, 372 F.2d 535, 538 (CCPA 1967). Second, the long-felt need must not have been satisfied by another before Appellant’s invention. *See Newell*, 864 F.2d at 768 (“[O]nce another supplied the key element, there was no long-felt need or, indeed, a problem to be solved . . .”). Third, the invention must, in fact, satisfy the long-felt need. *In re Cavanaugh*, 436 F.2d 491, 496 (CCPA 1971).

Here, Appellant has reasonably evidenced a persistent need that was recognized by ordinarily skilled artisans. Both Time-Warner experts indicate that cable theft in the multi-dwelling unit (MDU) environment using “Legacy Cable Distribution Boxes” that require a physical key to unlock

them has been, and continues to be, a problem since at least 1984. Shugarman Decl. ¶¶ 5-6, 11; Moel Decl. ¶¶ 6-7, 12. Because these declarations were signed in 2009, this problem has, therefore, persisted for at least 25 years. *See id.* Mr. Wolsiffer corroborates this longstanding problem by declaring in 2009 that MDU cable theft using these Legacy Boxes has been a problem since at least 1980—a problem that has, therefore, persisted for at least 29 years. *See* Wolsiffer Decl. ¶¶ 8-9, 16.

Mr. Paul's declaration is less probative in this regard, however. Although Mr. Paul states that MDU cable theft using these Legacy Boxes has been, and continues to be, a nationwide problem, this problem is said to have existed "for as long as I have been employed by Cox Communications." Paul Decl. ¶ 11. The length of this employment, however, is unclear from the facts in the declaration. Although Mr. Paul states that he is employed by Cox in paragraph 2 of the declaration, his (1) employment "in the cable industry" for the past 15 years, and (2) work on "Loss Prevention" in Las Vegas in the past 10 years in paragraphs 3 and 4 is not tied clearly to his employment with Cox—unlike commensurate facts in Mr. Wolsiffer's declaration. *Compare* Wolsiffer Decl. ¶ 3 ("For the past 31 years, I have been employed by Buckeye.").

All we can ascertain definitively in this regard from Mr. Paul's statements is that his employment with Cox is at least from October 14, 2009: the date he signed the declaration. Therefore, Mr. Paul's declaration only establishes that the MDU cable theft problem existed at least as of that date, namely for as long as he was employed by Cox. *See* Paul Decl. ¶ 11. This weakness, however, is mitigated somewhat by Mr. Paul's later statement that Cox has unsuccessfully attempted to stop cable theft by

various approaches *in the past 10 years*. Paul Decl. ¶ 14. These decade-long attempts, however, do not necessarily reflect Mr. Paul's employment with Cox.

Despite this somewhat weaker evidence, when considering the four declarations collectively as a whole, we find that Appellant has reasonably established that the MDU cable theft problem using Legacy Distribution Boxes that require a physical key to unlock them was recognized by ordinarily skilled artisans, and has been a problem that has persisted for at least 29 years.

Nor was this problem solved by another before Appellant's invention as the Examiner asserts. Ans. 27-28. As Appellant indicates, the problem is not just preventing cable theft as the Examiner contends, but rather cable theft in "Legacy Cable Distribution Boxes" that used keyed locks as a mechanism to secure those boxes. Reply Br. 3. Indeed, if these Legacy Boxes such as that disclosed by Christatos in 1985 solved this problem as the Examiner asserts, it begs the question why cable theft from these boxes was still a widespread problem in 2009, as all four experts agree.

In any event, the evidence on this record reasonably shows that the long-felt need to solve this theft problem from Legacy Distribution Boxes was not solved by another as Appellant indicates. App. Br. 13. First, Cox was unsuccessful in its attempts to stop cable theft from Legacy Boxes for a decade. Paul Decl. ¶ 14. Second, three experts declare that the design and operation of Legacy Distribution Boxes has remained unchanged for a number of years that, according to one expert, has been since at least 1980.

Wolsiffer Decl. ¶ 15.² Moreover, two experts declare that they were unaware of any cable distribution box technology that effectively addressed the MDU cable theft problem using Legacy Boxes before learning about distribution boxes developed by Remote Security Systems (RSS), LLC—the assignee of the present invention. *See* Wolsiffer Decl. ¶ 18; Paul Decl. ¶ 15; App. Br. 4 (noting this assignment). In fact, none of the cable distribution boxes that Mr. Wolsiffer reviewed from various vendors over the last 31 years included any functionality to enable remote unlocking or remote auditing—features that are provided by the RSS distribution box. Wolsiffer Decl. ¶¶ 14, 20. Based on this evidence, Appellant has not only reasonably shown that the above-noted long-felt need has not been satisfied by another before the claimed invention, but that others’ attempts to solve the cable theft problem from Legacy Boxes failed to do so.

Lastly, Appellant has reasonably shown that the claimed invention satisfies the long-felt need. First, claim 1 recites at least some elements that are reasonably commensurate with those used in RSS cable distribution boxes noted in the declarations, namely a distribution box that enables remotely (1) authorizing access to the box, and (2) unlocking the box after authorization is granted. *See* Shugarman Decl. ¶ 14; Moel Decl. ¶ 16; Paul Decl. ¶ 17; Wolsiffer Decl. ¶ 20. *Accord* App. Br. 14 (noting these elements in items (i) and (ii)). The RSS boxes’ authentication device, electronic access control system, and lock are also solely powered using power from the coaxial cable—another feature that is recited in claim 1 that is said to be

² *See also* Moel Decl. ¶ 13 (noting that the fundamental design and operation of Legacy Cable Distribution Boxes has remained unchanged since at least 1985); Paul Decl. ¶ 12 (same “for at least 15 years”).

critical to Time Warner, Cox, and Buckeye to easily deploy the boxes. *See* Shugarman Decl. ¶ 16; Moel Decl. ¶ 17; Paul Decl. ¶ 19; Wolsiffer Decl. ¶ 22. Accordingly, there is a reasonable nexus between the deployed RSS distribution boxes and the claimed invention.

Second, all four experts describe deployments of RSS cable distribution boxes that, at least in some of these deployments, eliminated theft where it had previously occurred. For example, Mr. Shugarman declares that, since 2006, Time Warner's Texas Region bought 225 RSS³ distribution boxes and deployed 42 of them in an MDU environment, replacing the previously-installed Legacy Boxes. Shugarman Decl. ¶ 13. Mr. Moel corroborates this deployment, albeit differing from Mr. Shugarman's statement by one year. *Compare* Moel Decl. ¶ 16 (noting Time Warner's purchase and deployment of 42 RSS boxes *since 2007*) with Shugarman Decl. ¶ 13 (noting this purchase and deployment *since 2006*). Despite this inconsistency, Mr. Shugarman notes that, as of August 28, 2009 ("[t]o date"), there have been no incidents of cable theft in MDU environments in which the RSS boxes were deployed. Shugarman Decl. ¶ 15.

To be sure, this result of 42 RSS boxes represents only a small fraction of the "thousands" of cable distribution boxes deployed in MDU environments in Time Warner's Texas Region (*see* Shugarman Decl. ¶ 5;

³ Although both Mr. Shugarman and Mr. Moel refer to these boxes as "RR Cable Distribution Boxes" (Shugarman Decl. ¶ 13; Moel Decl. ¶ 15), they nonetheless refer to "RSS Cable Distribution Boxes" elsewhere in the declarations. *See, e.g.*, Shugarman Decl. ¶¶ 12, 14-15; Moel Decl. ¶¶ 14, 16-17. Accordingly, we presume that "RR" was intended to be "RSS" and treat these errors as harmless typographical errors.

Moel Decl. ¶ 6—a factor that tends to weaken the probative value of the RSS boxes’ apparent theft-eliminating performance. Moreover, unlike Mr. Shugarman, Mr. Moel does not report on the actual results of these 42 deployed RSS boxes, let alone that they eliminated theft, but rather that they *enable* Time Warner to address the problems of MDU cable theft via their features. Moel Decl. ¶ 16. Still, the results observed after deploying these 42 RSS boxes noted by Mr. Shugarman tend to suggest that they may have contributed to eliminating MDU cable theft at least in the time period observed.

We reach a similar conclusion regarding Cox’s RSS distribution box deployment despite Cox’s buying only one such box and deploying it among thousands of other distribution boxes in MDU environments. Paul Decl. ¶¶ 5, 16. Although this very limited deployment tends to weaken its probative value, Mr. Paul was nonetheless unaware as of October 14, 2009 (“[t]o date”) of any incidents of cable theft in the MDU environment in which the single RSS box was deployed since 2008. Paul Decl. ¶ 18. This observation tends to suggest that the RSS box may have contributed to eliminating MDU cable theft at least in the time period observed.⁴

Buckeye’s deployment is perhaps the strongest evidence in this regard. In April 2009, Buckeye replaced 13 Legacy Distribution Boxes with RSS boxes in 13 high cable theft areas that experienced several thefts at each location in the year before this replacement, but Mr. Wolsiffer was unaware

⁴ That Cox is said to be in the process of identifying 20-30 high cable theft locations in which to deploy RSS distribution boxes has little probative value regarding the non-obviousness issue before us, for this statement merely pertains to possible future deployment of these boxes that may or may not occur.

of any thefts in those locations after replacement. Wolsiffer Decl. ¶¶ 19, 21. Although the approximately 6-month time period of this deployment is somewhat limited (from April 2009 to Oct. 1, 2009) which tends to weaken its probative value, along with his ‘lack of’ awareness statement, these results nonetheless tend to suggest that the deployed RSS boxes may have contributed to eliminating MDU cable theft at least in the time period observed.

Although each of the four declarations has some weaknesses that tend to reduce their probative value, they nonetheless have other aspects that tend to support Appellant’s position that the claimed invention satisfies a long-felt but unsolved need and failure of others. We cannot say—nor has the Examiner shown—that these weaknesses considered with the other evidence of record, namely the prior art references cited in the rejection,⁵ outweigh the countervailing evidence of non-obviousness evidenced in the declarations.

What we can say, however, is that the Examiner’s premise in treating this evidence as insufficient because it allegedly involves improving on an *already-solved problem* of preventing cable theft is untenable. Ans. 27-28. That mischaracterizes the problem: rather, it is cable theft in MDU environments using Legacy Distribution Boxes that require a physical key to

⁵ Although the Examiner cites four references (Voegeli, Masters, Palermo, and Abroy) in the Examiner’s response to Appellant’s arguments (Ans. 27), these references were not cited in the rejections, nor will we consider them here. *See In re Hoch*, 428 F.2d 1341, 1342 n.3 (CCPA 1970) (“Where a reference is relied on to support a rejection, whether or not in a ‘minor capacity,’ there would appear to be no excuse for not positively including the reference in the statement of the rejection.”).

unlock the boxes—a problem that has persisted for at least 29 years as evidenced by the declarations.

That said, we recognize that the Examiner’s findings regarding the teachings of Wheeler, Christatos, Vitale, and Kamiya are undisputed, as is their combinability. Ans. 4-6, 26-30. And we recognize that if a technique has been used to improve one device (e.g., a system with a lock configured to receive a signal from a control system to electronically unlock a device when access is granted), and an ordinarily skilled artisan would recognize that it would improve similar devices (e.g., cable distribution boxes) in the same way, using the technique is obvious unless its actual application is beyond his or her skill. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007). Moreover, merely predictably using prior art elements according to their established functions is likewise an obvious improvement. *Id.*

But even assuming, without deciding, that the Examiner’s rejection based on the undisputed collective teachings of Wheeler, Christatos, Vitale, and Kamiya applies these fundamental obviousness principles, that still does not obviate the requirement that this prior art-based evidence must be properly considered in conjunction with other evidence of secondary considerations of non-obviousness and weighed appropriately in determining whether the claimed invention would have been obvious at the time of the invention.

That requirement is particularly crucial where, as here, the secondary considerations evidence may be the most probative and cogent evidence of non-obviousness on this record “in avoiding the trap of hindsight when reviewing, what otherwise seems like, a combination of known elements.” *See Leo Pharm.*, 726 F.3d at 1358.

On this record, the Examiner has failed to properly consider this evidence in its proper context, namely that it establishes a long-felt but unsolved need and failure of others regarding the MDU cable theft problem using Legacy Distribution Boxes that require a physical key to unlock them—a problem that has persisted for at least 29 years. Although we decline to undertake this fact-intensive analysis here in the first instance on appeal, we nevertheless refer the Examiner to our findings above regarding the relative strengths and weaknesses of the four expert declarations in this regard. In reassessing whether the claimed invention would have been obvious, the Examiner should weigh these relative strengths and weaknesses along with the prior art-based evidence cited in the rejection in arriving at a conclusion.

Therefore, we are constrained by this record to conclude that the Examiner erred in rejecting claims 1, 3-7, 9, 10, 12, 13, 15, 18, 30, 33, and 35-39 as obvious over Wolsiffer, Christatos, Vitale, and Kamiya.

THE OTHER OBVIOUSNESS REJECTIONS

Because the above-noted deficiencies apply to the Examiner's other obviousness rejections of claims 8, 11, 14, 19, 21-27, 31, 32, and 34 (Ans. 18-25), we will not sustain the obviousness rejections of these claims for similar reasons.

CONCLUSION

The Examiner erred in rejecting claims 1, 3-15, 18, 19, 21-27, and 30-39 under § 103.

Appeal 2011-011620
Application 10/656,687

ORDER

The Examiner's decision rejecting claims 1, 3-15, 18, 19, 21-27, and 30-39 is reversed.

REVERSED

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