

NOTE: This disposition is nonprecedential.

**United States Court of Appeals
for the Federal Circuit**

VALMONT INDUSTRIES, INC.,
Appellant

v.

LINDSAY CORPORATION,
Cross-Appellant

2017-1235, 2017-1288

Appeals from the United States Patent and Trade-
mark Office, Patent Trial and Appeal Board in No.
IPR2015-01039.

Decided: May 9, 2018

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argued for appellant. Also represented by WES
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Park, KS, argued for cross-appellant. Also represented by
MATTHEW B. WALTERS.

Before LOURIE, DYK, and HUGHES, *Circuit Judges*.

DYK, *Circuit Judge*.

Valmont Industries, Inc. (“Valmont”) appeals from the final decision of the Patent Trial and Appeal Board (“the Board”) in an inter partes review, finding claims 1–10, 12–15, 17, and 18 of U.S. Patent No. 7,003,357 B1 (“the ’357 patent”) unpatentable as obvious. Lindsay Corp. (“Lindsay”) cross-appeals the Board’s determination that claim 11 was not obvious. We *affirm* the Board’s determination of obviousness with respect to claims 1–10, 12–15, 17, and 18 and *reverse* as to claim 11.

BACKGROUND

The ’357 patent is directed to remotely monitoring and controlling irrigation equipment using handheld devices. A remote user interface displays icons, referred to in this patent as graphical user interfaces (“GUIs”), which show the status of irrigation equipment and allow its control. Prior art systems monitored and controlled irrigation equipment through personal computers. Because personal computers are typically located at a base station, these systems required users to return to the base station to control the irrigation equipment. The ’357 patent is directed to the use of handheld devices to allow a user to view the status of and control irrigation equipment from any location using wireless telemetry technology.

Claim 1 is illustrative and reads as follows:

A remote user interface for reading the status of and controlling irrigation equipment, comprising:

a hand-held display;

a processor;

wireless telemetry means for transmitting signals and data between the remote user interface and the irrigation equipment; and

software operable on said processor for:

- (a) displaying data received from the irrigation equipment as a plurality of GUIs that are configured to present said data as status information on said display;
- (b) receiving a user's commands to control the irrigation equipment, through said user's manipulation of said GUIs; and
- (c) transmitting signals to the irrigation equipment to control the irrigation equipment in accordance with said user's commands.

'357 pat., col. 6 ll. 47–64.

Dependent claim 6 requires GUIs shaped to identify particular types of irrigation equipment, and dependent claim 10 requires GUIs shaped to identify operating irrigation patterns for specific irrigation equipment. Claim 11, which depends from claims 1, 6, and 10, further requires:

The remote user interface of claim 10 wherein said software is further operative on said processor to change the shape of said plurality of GUIs change [sic] in response to a change in the status of the irrigation equipment.

Id. at col. 7 ll. 29–32.

Claims 4 and 5 further require specific types of radio links as the “wireless telemetry means.” *Id.* at col. 7 ll. 4–8. Claim 17 describes a method of directly controlling irrigation equipment with a single remote user interface. *Id.* at col. 8 ll. 15–26.

The Board found that all of the challenged claims, except claim 11, would have been obvious to a person of ordinary skill in the art, but that claim 11 would not have

been obvious. Valmont appeals as to claims 1–10, 12–15, 17, and 18, and Lindsay cross-appeals as to claim 11. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A). We review the Board’s legal conclusions de novo and its factual findings for substantial evidence. *Rambus, Inc. v. Rea*, 731 F.3d 1248, 1251 (Fed. Cir. 2013).

DISCUSSION

I

We first consider whether substantial evidence supports the Board’s determination that claims 1–10, 12–15, 17, and 18 would have been obvious.

A claim is unpatentable as obvious under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person of ordinary skill in the art. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406–07 (2007).

The Board found that claims 1–3, 6–10, 12–14, 17, and 18 would have been obvious in view of the Scott and Pyotsia references. Scott teaches remotely monitoring and controlling an irrigation system using a computer to display GUIs. Pyotsia teaches remotely monitoring and controlling various types of field devices for industrial processes using a handheld device displaying GUIs. The Board found that a person of ordinary skill in the art would have been motivated to combine the two references because the handheld devices in Pyotsia provided greater portability and mobility than the laptop computers in Scott. The Board further determined that a person of skill in the art would have had a reasonable expectation of success in combining the two.

On appeal, Valmont argues that there was insufficient evidence of a motivation to combine Scott and Py-

otsia with a reasonable expectation of success. Valmont urges that the handheld devices in Pyotsia lacked sufficient display capabilities and computing capacity to operate the Scott system. However, Dr. Rosenberg testified that at the time of the invention, a person of ordinary skill would be able to employ the system of Scott on a mobile device disclosed in Pyotsia. J.A. 1144. Dr. Rosenberg also testified that mobile phones at the time, including the Nokia 9000 Communicator, the Benefon ESC!, and the Sony Ericsson P800, could display GUIs and receive user commands through manipulation of GUIs. And Dr. Rosenberg testified that a person of ordinary skill would have “the desire to provide enhanced portability and mobility” and that “there has been a consistent desire and goal of shrinking hardware and software to squeeze the most functionality out of the smallest hardware package available.” J.A. 1145, 2068. Substantial evidence supports the Board’s determination that a person of ordinary skill would have had a reasonable expectation of success in combining Scott and Pyotsia and would have been motivated to make the combination.

In addition to finding claims 1–3, 6–10, 12–14, 17, and 18 would have been obvious in view of Scott and Pyotsia, the Board also found that claims 4, 5, and 15 would have been obvious in view of Scott, Pyotsia, and Abts, another prior art reference that discloses a system for controlling and monitoring agricultural field equipment. Valmont separately argues that claims 4, 5, and 17 would not have been obvious. We conclude that substantial evidence supports the Board’s decision with respect to these claims. As to claims 4 and 5, which require specific types of radio links, the Board found that the combination would have been obvious because Scott specifically teaches using a radio link to transmit signals, and Abts taught the specific type of radio links of claims 4 and 5. A person skilled in the art would be motivated to add Abts to the combination

of Scott and Pyotsia to select the type of radio link most suitable to the environment for operating the system. As to claim 17, which requires a single remote user interface and direct control, the Board found that Pyotsia discloses a single remote user interface and that Scott discloses direct control. J.A. 29 (noting that Valmont “does not dispute” that the combination of Scott and Pyotsia teaches these two limitations of claim 17). As discussed above, a person of ordinary skill would have been motivated to combine Scott and Pyotsia because of the desire to operate the Scott system on handheld devices for increased portability and mobility.

Thus, substantial evidence supports the Board’s determination that claims 1–10, 12–15, 17, and 18 of the ’357 patent are unpatentable as obvious.

II

Valmont also argues that the Board improperly considered new arguments and evidence that Lindsay submitted in its reply and accompanying declaration. We disagree.

Lindsay’s petition argued that the claims of the patent were obvious based on the combination of Scott and Pyotsia, the same combination relied on by the Board to find obviousness of claims 1–10, 12–15, 17 and 18. Lindsay supplied a declaration from Dr. Rosenberg that stated “it would have been obvious to one of ordinary skill at the time to combine Scott with Pyotsia” because “one of ordinary skill in the art could easily employ the monitoring and controlling system of Scott . . . on a mobile phone or PDA disclosed by Pyotsia” and “these inventions are within the field of remote monitoring and control of field devices, combined with the desire to provide enhanced portability and mobility.” J.A. 1142, 1144, 1145. In its patent owner response, Valmont submitted a declaration from Dr. Mercer stating that a person of ordinary skill

could not easily combine the two references because handheld devices did not have sufficient display capabilities or computing capacity. Lindsay then responded with a reply and a second supporting declaration from Dr. Rosenberg, which explained that the handheld devices of Pyotsia would have sufficient display capabilities and computing capacity.

Valmont objected to the second Rosenberg declaration as improper addition of new evidence. The Board rejected Valmont's objections, finding that Lindsay's reply and supporting evidence were limited to arguments responsive to Valmont's patent owner response, as required under 37 C.F.R. § 42.23(b). J.A. 39. Section 42.23(b) states that "[a] reply may only respond to arguments raised in the corresponding opposition, patent owner preliminary response, or patent owner response." 37 C.F.R. § 42.23(b).

Valmont argues that a petitioner is only allowed to submit additional evidence not originally submitted with the petition in two circumstances: (1) for addressing the admissibility of objected-to evidence under 37 C.F.R. § 42.64 or (2) by seeking leave to submit supplemental information under 37 C.F.R. § 42.123. This is incorrect.

No statutes or rules prohibit a petitioner from submitting additional evidence after the petition, and § 42.23(b) specifically permits it. Our case law makes clear that a petitioner may submit additional evidence in the reply in response to the patent owner response. In *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1080 (Fed. Cir. 2015), we held that a patent owner "ha[d] not established that it was denied its procedural rights" when a petitioner submitted a new declaration with its reply. *See also Altaire Pharms., Inc. v. Paragon Biotech, Inc.*, No. 2017-1487, Slip Op. at 14–17 (Fed. Cir. Apr. 25, 2018) (finding an abuse of discretion when the Board failed to consider a second declaration submitted with a reply that responded to

arguments raised in the corresponding patent owner response); *Genzyme Therapeutic Prod. Ltd. P'ship v. Biomarin Pharm. Inc.*, 825 F.3d 1360, 1364–69 (Fed. Cir. 2016) (finding it permissible for the petitioner to cite two references in the reply that were not cited in the petition to show the state of the art at the time). Thus, the Board did not violate its rules or due process requirements in concluding that the second Rosenberg declaration fairly responds only to arguments made in Dr. Mercer's declaration and Valmont's response.

The Board's procedures in IPR proceedings provide the patent owner with notice and opportunity to respond as required by due process and the Administrative Procedure Act. *See* 5 U.S.C. § 554(b)(3), (c), (d); *In re Biedermann*, 733 F.3d 329, 336–37 (Fed. Cir. 2013); *Abbott Labs. v. Cordis Corp.*, 710 F.3d 1318, 1328 (Fed. Cir. 2013). In *Belden*, we explained that “if the petitioner submits a new expert declaration with its Reply, the patent owner can respond in multiple ways.” 805 F.3d at 1081. Valmont argues it was “deprived of the opportunity to try to exclude or even respond to the arguments supported by this new evidence [in the second Rosenberg declaration].” Appellant Br. 30. In fact, Valmont cross-examined Dr. Rosenberg, filed observations with the Board, and addressed the evidence at oral argument before the Board. We see no error in the Board's consideration of the second Rosenberg declaration.

Valmont additionally argues that the second Rosenberg declaration should have been excluded because it was necessary to make a *prima facie* case of obviousness, as required by PTO rules and guidance. *See* 37 C.F.R. § 42.22(a)(2); *Office Patent Trial Practice Guide*, 77 Fed. Reg. 48,756, 48,767. It goes on to argue at length that “Lindsay's petition failed to establish a *prima facie* case of unpatentability.” Appellant Reply Br. 2. In *Cuozzo Speed Technologies, LLC v. Lee*, 136 S. Ct. 2131, 2142 (2016), the

Supreme Court held that the “where a patent holder merely challenges the Patent Office’s ‘determin[ation] that the information presented in the petition . . . shows that there is a reasonable likelihood’ of success ‘with respect to at least 1 of the claims challenged,’ § 314(a), or where a patent holder grounds its claim in a statute closely related to that decision to institute inter partes review, § 314(d) bars judicial review.” In that case, the Supreme Court concluded that the patent owner’s claim was “little more than a challenge to the Patent Office’s conclusion, under § 314(a), that the ‘information presented in the petition’ warranted review,” and was therefore unreviewable. *Id.* The same is true with Valmont’s argument here, which seems to be a back-door attempt to challenge whether the Board properly instituted review based on whether the petition contained a prima facie case of obviousness. Under *Cuozzo*, this contention is not appealable.

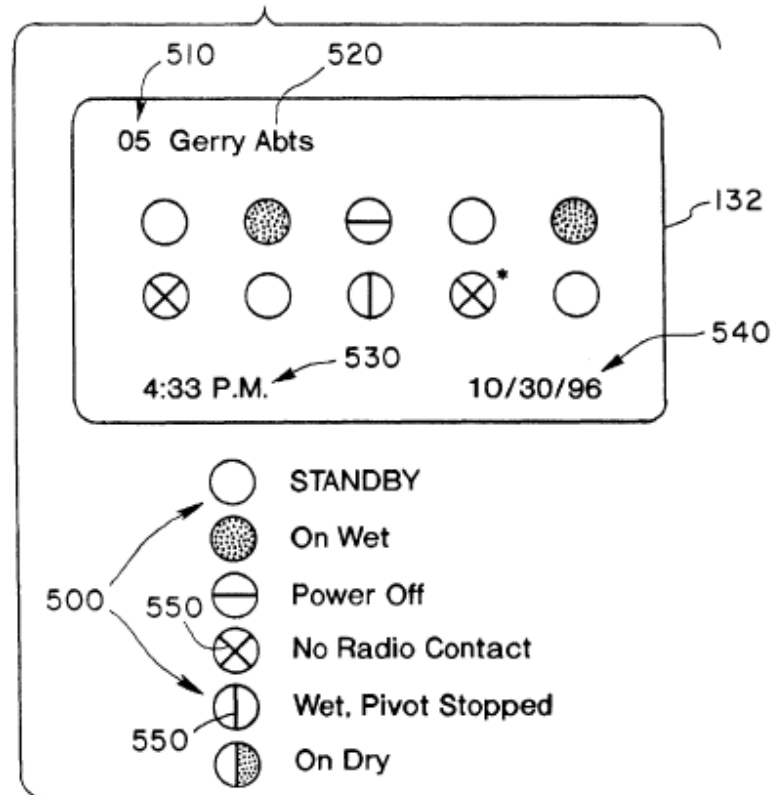
III

Lastly, we address claim 11. Lindsay cross-appeals, arguing that the Board erred in declining to find claim 11 obvious in view Scott, Pyotsia, and Abts.

Claim 11 depends from claims 1, 6, and 10. Claims 6 and 10 add the requirements that the remote user interface display irrigation equipment status information as a plurality of GUIs “shaped to identify particular types of irrigation equipment” and “to identify operating irrigation patterns for specific irrigation equipment.” ’357 pat., col. 7 ll. 9–14, 26–28. Additionally, claim 11 requires that the software be operative “to change the shape of said plurality of GUIs change [sic] in response to a change in the status of the irrigation equipment.” *Id.* at col. 7 ll. 29–32.

The Abts reference teaches displaying circle-shaped or square-shaped GUIs in which status information as to

irrigation patterns is indicated in various ways, including by shading, as shown below:



U.S. Patent No. 6,337,971 B1, fig. 5.

A

The first question is whether shading constitutes a change in “shape.” In matters of claim construction before the Board as to unexpired patents, we apply the broadest reasonable construction standard. *Cuozzo*, 136 S. Ct. at 2144–45. The Board concluded that “shading within the original GUI does not change the shape of the GUI.” J.A. 36. However, we conclude that a change in shape occurs when there is a change in pattern, such as through shading.

Webster’s dictionary defines “shape” as “the visible makeup characteristic of a particular item or kind of item.” *Webster’s Third International Dictionary* 2087 (2002). A change in shading falls within this definition as it is a change in the visible makeup characteristics of the circle.

Most significantly, the specification discusses shading and discloses that shading constitutes a change in shape. For example, the specification describes a GUI to represent a pivot irrigation system that could be partitioned into wedges to depict different settings along the pivot path. It then states, “[d]ifferent colors or patterns can be used to shade each wedge to depict the particular spray pattern chosen for each wedge.” ’357 pat., col. 5 ll. 25–27. It then describes how “cross-hatching” may represent one setting and a “speckled pattern” may represent another. It also teaches that the user can “modify each of the wedge portions of the pivot GUI as desired.” *Id.* at col. 5 ll. 36–37. Thus, changes in shading of the GUI reflect a change in status of irrigation patterns. This suggests that a change in shading is a change in shape within the scope of claim 11. *See also id.* at col. 4 ll. 23–25 (“It is contemplated that a system of color-coding could be incorporated into the pivot GUI 122 to further indicate additional status information.”).

Additionally, during oral argument before the Board, Valmont conceded that shape includes the color within a GUI, contrary to the Board’s limiting construction that changing shape required changes to the circle itself. In describing the claim requirements, Valmont argued that “various things . . . can be done with the GUI to show these different properties of each of the irrigation equipment,” including “[i]t could be . . . a different color, whether it’s on or it’s off.” J.A. 2386.

Then, when the Board asked, “[d]o you have something in your spec that’s a GUI that is shaped like a piece of equipment, shaped like a pattern and then changes to show status?”, Valmont responded:

[T]he pictures don’t particularly show whether there’s a change in color or a change in pattern across the GUI. One thing to keep in mind is that when it says the shape or the status information in the GUI, shape doesn’t necessarily have to be just that it’s a circle or just that it’s a triangle. It could potentially be that it’s a circle that’s got lines through it or a triangle that has a checkerboard pattern across it. So there’s different kinds of shapes that it could be that would allow it to show all of these different products.

Id. (emphasis added.) Thus, under Valmont’s own definition, a change in shading would constitute a change in shape of the GUI.

Under the broadest reasonable construction standard, a change in shape occurs when there is a change in shading.

B

The Board also determined that Abts did not disclose GUIs shaped to identify an irrigation pattern. However, we conclude that the circle-shaped GUIs in Abts are shaped to identify an irrigation pattern. The Board’s contrary decision is not supported by substantial evidence.

Abts, like Scott itself, discloses circle-shaped GUIs to represent pivot irrigation systems. ’971 pat., col. 20 ll. 22–23 (“[I]con 610 is circular, and could be used to designate a pivot.”); J.A. 305. Pivot irrigation systems by their nature irrigate in circular patterns. Thus, the circle-shaped GUIs are shaped to identify an irrigation pattern.

Within the circular irrigation patterns, Abts teaches a change in shading to reflect a change in irrigation pattern because it teaches shading circle-shaped GUIs to update irrigation equipment status information. '971 pat., col. 4 ll. 42–46, col. 6 ll. 55–56, fig. 5. Contrary to the Board's determination, the combination of Scott, Pyotsia, and Abts therefore discloses the limitations of claim 11. A person skilled in the art would have been motivated to add Abts to the already obvious combination of Scott and Pyotsia to secure the advantages of visually identifying changes in irrigation patterns. Valmont's argument that Abts merely disclosed "rudimentary graphics" does not refute a finding of obviousness because the claims do not require any particular resolution.

CONCLUSION

We affirm the Board's denial of Valmont's motion to exclude and determination that claims 1–10, 12–15, 17, and 18 of the '357 patent are unpatentable as obvious. We reverse the Board's determination with respect to claim 11 and conclude that it is unpatentable as obvious.

AFFIRMED-IN-PART, REVERSED-IN-PART

COSTS

Costs to Lindsay.