

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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HOLT'S CIGAR HOLDINGS, INC.,  
Petitioner,

v.

BOVEDA INC.,  
Patent Owner.

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Case IPR2015-01844  
Patent 5,936,178

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Before BRIAN J. MCNAMARA, HYUN J. JUNG, and  
CHRISTOPHER M. KAISER, *Administrative Patent Judges*.

KAISER, *Administrative Patent Judge*.

DECISION  
Denying Institution of *Inter Partes* Review  
*37 C.F.R. § 42.108*

## INTRODUCTION

### *A. Background*

Holt's Cigar Holdings, Inc. ("Petitioner") filed a Petition (Paper 2, "Pet.") requesting an *inter partes* review of claims 12, 13, 15, 19–21, 24–26, and 31–34 of U.S. Patent No. 5,936,178 (Ex. 1001, "the '178 patent"). Boveda, Inc. ("Patent Owner") filed a Preliminary Response.<sup>1</sup> Paper 5 ("Prelim. Resp.").

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b); 37 C.F.R. § 42.4(a). The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted "unless the Director determines . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition."

After considering the Petition and the Preliminary Response, we determine that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that any of the claims it challenges are unpatentable. Accordingly, we do not institute *inter partes* review.

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<sup>1</sup> Patent Owner's Preliminary Response was accompanied by a motion seeking acceptance of the Preliminary Response because it was filed by electronic mail. Paper 6. The submission via electronic mail occurred because the Patent Review Processing System was unavailable on the date when the Preliminary Response was due. *Id.* at 1. Patent Owner's motion meets the requirements of 37 C.F.R. § 42.6(b)(2), which governs the acceptance of submissions made by means other than electronic filing. Accordingly, we grant the motion and accept Patent Owner's filing via electronic mail.

*B. Related Matters*

Neither party has identified any related matters involving the '178 patent. Pet. 1; Paper 4. We note that a related patent, U.S. Patent No. 6,921,026, is being challenged in IPR2015-01845.

*C. The Asserted Grounds of Unpatentability*

Petitioner contends that claims 12, 13, 15, 19–21, 24–26, and 31–34 of the '178 patent are unpatentable under 35 U.S.C. § 103 based on the following grounds (Pet. 8–56):<sup>2</sup>

<b>Statutory Ground</b>	<b>Basis<sup>3</sup></b>	<b>Challenged Claims<sup>4</sup></b>
§ 103	St. Charles, Tolman, Spruill, and Harrison	12, 13, 19, 20, 24–26
§ 103	St. Charles and Harrison	31, 32, 34

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<sup>2</sup> Petitioner also provides a declaration from Fernando J. Muzzio, Ph.D. Ex. 1003 (“the Muzzio Declaration” or “Muzzio Decl.”).

<sup>3</sup> St. Charles, U.K. Patent Application Publication No. GB 2 222 816 A, published Mar. 21, 1990 (Ex. 1005) (“St. Charles”); Harrison et al., European Patent Application Publication No. 0 212 913 A2, published Mar. 4, 1987 (Ex. 1006) (“Harrison”); Tolman et al., U.S. Patent No. 5,130,018, issued July 14, 1992 (Ex. 1007) (“Tolman”); Spruill et al., U.S. Patent No. 5,035,731, issued July 30, 1991 (Ex. 1008) (“Spruill”); Klett, U.S. Patent No. 5,773,105, issued June 30, 1998 (Ex. 1009) (“Klett”); Dobson, Jr. et al., U.S. Patent No. 4,822,500, issued Apr. 18, 1989 (Ex. 1010) (“Dobson”).

<sup>4</sup> The list of challenged claims in the Petition, Pet. 2–3, omits certain claims for which detailed arguments are presented, Pet. 8–56, and includes some claims with no detailed arguments. In reciting the claims challenged on each ground, we rely on the detailed arguments Petitioner presents rather than on the list of claims.

<b>Statutory Ground</b>	<b>Basis<sup>3</sup></b>	<b>Challenged Claims<sup>4</sup></b>
§ 103	St. Charles, Tolman, Spruill, Harrison, and Klett	15, 20, 21, 33
§ 103	St. Charles, Tolman, Spruill, and Dobson	12, 19, 24–26
§ 103	St. Charles and Dobson	31, 34

*D. The '178 Patent*

The '178 patent relates to humidity control devices that can maintain a desired humidity level. Specifically, the '178 patent describes a humidity control device that includes

a case with a plurality of openings, a polymeric pouch having walls sufficiently thin to permit migration of water through the film in the form of water vapor and yet thick enough to prevent the escape of liquid water, and a solution including an organic or an inorganic solute (e.g., salt or sugar), vegetable gum and water.

Ex. 1001, 5:43–49. The '178 patent describes the saturated solution as “contain[ing] excess solute (e.g., salt or sugar crystals) and [as] preferably made more viscous with a thickening agent.” *Id.* at 5:50–52. “The case may be of any suitable size and shape,” *id.* at 5:55, and the '178 patent describes using the humidity control device in various spaces, such as “a violin case,” *id.* at 5:56, “a piano,” *id.* at 5:65, “a bulk package of tobacco products or confections,” *id.* at 5:65–66, and a “case . . . for use in conjunction with a bass violin,” *id.* at 6:5–6.

*E. Illustrative Claim*

Of the challenged claims in the '178 patent, claims 12, 19, and 31 are independent. Claim 12 is illustrative and recites:

12. A humidity control device for maintaining a desired humidity,  
said device including a protective case, a water vapor permeable pouch and a thickened saturated salt solution,  
said case comprising wall means defining an enclosure, said wall means including a plurality of openings through which water vapor may freely move,  
said pouch being formed of a thin wall polymer film through which water vapor may pass,  
said thickened saturated salt solution comprising water, salt and a thickening agent, said thickening agent being present in an amount sufficient to thicken the salt solution,  
said salt solution being contained within the polymeric pouch and sealed from escape from the pouch,  
said pouch containing the thickened salt solution, said pouch being contained within the protective case to protect the pouch from rupture.

Ex. 1001, 9:43–57 (paragraphing added for clarity).

ANALYSIS

*A. Claim Construction*

In an *inter partes* review, we construe claim terms in an unexpired patent according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1275–79 (Fed. Cir. 2015), *cert. granted sub nom. Cuozzo Speed Techs. LLC v. Lee*, 136 S. Ct. 890

(mem.) (2016).<sup>5</sup> Claim terms also are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Petitioner proposes constructions for “wall means” and “amount sufficient to thicken the salt solution.” Pet. 4. Patent Owner disputes both of these proposed constructions. Prelim. Resp. 10–14. In addition, Patent Owner notes several terms that it contends do not require construction and for which Petitioner did not propose a construction. *Id.* at 15–17. Although there are two terms—“wall means” and “amount sufficient to thicken the salt solution”—whose meanings the parties dispute, neither of these terms needs to be construed expressly in order to resolve the present dispute. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy”). Accordingly, there are no terms that we need to construe expressly.

*B. Asserted Obviousness over St. Charles, Tolman, Spruill, and Harrison*

Petitioner argues that claims 12, 13, 19, 20, and 24–26 are unpatentable under 35 U.S.C. § 103(a) as obvious over the combination of St. Charles, Tolman, Spruill, and Harrison. Pet. 8–28. Relying on the testimony of Dr. Muzzio, Petitioner explains how these references allegedly teach all the limitations of these claims and argues that a person of ordinary skill in the art would have combined these references. *Id.*

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<sup>5</sup> We note that neither party proposes any different claim-construction standard. Pet. 3; Prelim. Resp. 9.

*1. St. Charles*

St. Charles is directed to a “storage package for storing moisture-laden articles such as cigarettes,” including “a moisture control vehicle” that is “treated with a saturated salt solution . . . to maintain moisture equilibrium over an extended time period.” Ex. 1005, at [57]. St. Charles teaches a moisture control vehicle “in the form of a pouch,” in which a “gel, paste, liquid or powder form” of the humidifying agent is placed, so as “to allow water vapour to pass readily [through the pouch] but not liquid.” *Id.* at 10. The pouches in St. Charles can be made of cellulose acetate film, dialysis tubing, nylon, or ethylene vinyl acetate copolymers. *Id.* St. Charles teaches that “small semi-rigid containers . . . could work as well as pouches.” *Id.*

*2. Tolman*

Tolman is directed to a “tethered container of desiccant and a surrounding protective cage for entry into an enclosed space to extract moisture.” Ex. 1007, at [57]. Tolman particularly is directed to removing moisture from “confined spaces in which are stored nonaqueous fluids, such as gasoline and oil.” *Id.* at 2:34–35. In particular, Tolman teaches “protect[ing] the desiccant container . . . from damage or rupture during its entry into, presence in, or extraction from the confined space from which moisture is to be extracted.” *Id.* at 2:39–43; *see also id.* at 5:53–61, Figs. 2, 3 (describing protective cage for desiccant container).

*3. Spruill*

Spruill is directed to an “insert for inclusion in a substantially sealed container to control the relative humidity within the container.” Ex. 1008, at [57]. Spruill’s insert is “a packet at least part of the surface of which is a membrane capable of passing water vapor and which contains a buffering

substance which is a saturated salt solution selected according to the desired relative humidity.” *Id.* Spruill teaches that the packet may be “made by heat sealing a polylaminated foil layer **12** and a microporous or water vapor-permeable membrane **13** around their edges.” *Id.* at 4:67–5:2. Spruill’s membrane “should allow the passage of water vapor while containing the humidity controlling solution itself” and “can either be inherently water vapor-permeable” or “can be impermeable but microporous.” *Id.* at 5:9–18.

#### 4. *Harrison*

Harrison is directed to “[a]queous compositions containing an organic peroxyacid . . . for bleaching/washing or disinfection.” Ex. 1006, at [57]. According to Harrison, these compositions can “suffer from loss of available oxygen . . . during storage.” *Id.* Accordingly, Harrison teaches “employing the [peroxyacid] in particulate form and incorporating in the aqueous phase a water-soluble potassium salt of a non-reducing acid.” *Id.* Harrison teaches placing the resulting composition “in pouches, sachets or bottles.” *Id.* at 6:16–17. Harrison also teaches “incorporating into the composition a small amount of one or more water-soluble or insoluble thickener[s] whereby the phase is thickened to a viscous fluid, in which the solid particles can be suspended.” *Id.* at 4:35–5:1.

#### 5. *Analysis of Obviousness of Claims 12, 13, 19, 20, and 24–26*

Petitioner asserts that each of the limitations of claim 12 is taught or suggested by at least one of the St. Charles, Tolman, Spruill, and Harrison references. Pet. 8–18. Patent Owner does not dispute the teaching of the limitations of claim 12 in the prior-art references, except for the limitation requiring a “protective case,” which Patent Owner argues is not taught in St. Charles, Spruill, or Harrison. Prelim. Resp. 26–28. Patent Owner concedes



that Tolman teaches a protective case but argues that the person of ordinary skill in the art would not have combined Tolman's case with the teachings of the other references. *Id.* at 28. Finally, Patent Owner argues that Harrison is not analogous art to the '178 patent. *Id.* at 32.

On this last point, we are persuaded that Petitioner has not shown sufficiently that Harrison is analogous to the '178 patent. "To be considered within the prior art for purposes of the obviousness analysis, a reference must be . . . from the same field of endeavor or . . . reasonably pertinent to the particular problem the inventor is trying to solve." *Circuit Check Inc. v. QXQ Inc.*, 795 F.3d 1331, 1335 (Fed. Cir. 2015). Petitioner does not argue either that Harrison is in the same field of endeavor as the '178 patent or that it is reasonably pertinent to the problem solved by the '178 patent's inventor. Petitioner's only argument is that Harrison is "in the same field of endeavor" as St. Charles. Pet. 9. Even assuming that Petitioner meant that Harrison is in the same field of endeavor as the '178 patent, we are not persuaded this is true. Harrison is directed to the preservation of bleaching solutions from chemical degradation during storage. Ex. 1005, at [57]. To place this reference in the same field as the '178 patent, which is directed to devices for controlling the humidity in enclosures such as musical instrument cases and tobacco product packages, would require a broad definition of "field of endeavor" that Petitioner has supported insufficiently with arguments or evidence.

As to the second part of the analogous-art test, Petitioner offers no argument that Harrison is reasonably pertinent to the problem solved by the inventor of the '178 patent. It therefore is unclear why Harrison would have been commended to the attention of a person of ordinary skill in the art

trying to solve the problem of controlling humidity. It may be true, as Petitioner suggests, Pet. 10, that, in solving the problem of humidity control, the inventor of the '178 patent would have been inspired to thicken an aqueous solution for several reasons and that Harrison teaches or suggests thickening an aqueous solution. But this does not mean that a reference about the degradation of peroxyacid solutions “logically would have commended itself to an inventor’s attention in considering” the problem of humidity control. *See In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992). Without any evidence or argument explaining why it would have done so, we are not persuaded that a person of ordinary skill in the art would have looked to Harrison. Accordingly, Petitioner cannot show obviousness by relying on Harrison.

For this asserted ground, Petitioner relies on Harrison to show the obviousness of each claim. In claim 12, Petitioner relies on Harrison to teach the recited “thickening agent.” Pet. 9 (relying on St. Charles to teach a “thickened salt solution” but on Harrison to teach a “thickener”), 15–16 (same). The same is true for independent claim 19. *Id.* at 21, 24–25. Accordingly, Petitioner has not presented sufficient evidence of obviousness of either claim 12 or claim 19 to permit us to determine that Petitioner has a reasonable likelihood of prevailing in showing the unpatentability of those claims. Because claims 13, 20, and 24–26 depend from claims 12 and 19, Ex. 1001, 9:58–60, 10:28–29, 10:40–49, Petitioner also has not demonstrated a reasonable likelihood of prevailing as to those claims.

*C. Asserted Obviousness over St. Charles and Harrison*

Petitioner asserts that claims 31, 32, and 34 are obvious over the combination of St. Charles and Harrison. Pet. 28–34. Petitioner relies on

Harrison to show the obviousness of claim 31. *Id.* at 29, 31–32. As discussed above, Petitioner has not shown sufficiently that Harrison is analogous art to the '178 patent. Accordingly, Petitioner has not demonstrated a reasonable likelihood of prevailing in showing the obviousness of claim 31. Claims 32 and 34 depend from claim 31, and Petitioner relies on Harrison to teach the additional limitation of claim 34. Ex. 1001, 11:10–15, 12:3–6; Pet. 33–34. Thus, Petitioner has not demonstrated a reasonable likelihood of prevailing in showing the obviousness of these claims.

*D. Asserted Obviousness over St. Charles, Harrison, Spruill, Tolman, and Klett*

Petitioner asserts that claims 15, 20, 21, and 33 are obvious over the combination of St. Charles, Harrison, Spruill, Tolman, and Klett. Pet. 34–38. We are not persuaded that Petitioner has demonstrated a reasonable likelihood of prevailing in showing the obviousness of these claims, each of which depends from claims 12, 19, or 31. Petitioner relies on Harrison to teach the limitations of these independent claims. *Id.* As discussed above, Harrison is not analogous art to the '178 patent.

*E. Asserted Obviousness over St. Charles, Spruill, Tolman, and Dobson*

Petitioner argues that claims 12, 19, and 24–26 are obvious over the combination of St. Charles, Spruill, Tolman, and Dobson. Pet. 38–51.

*1. Dobson*

Dobson teaches “well treating fluids for use in the drilling and servicing of wells in subterranean formations.” Ex. 1010, 1:7–9. These fluids are “saturated brine fluids having suspended therein one or more water soluble salts which are insoluble in the saturated brine.” *Id.* at 1:9–11.

Dobson teaches using “an additive to maintain the salt particles in suspension” and specifically teaches “[x]anthan gum” as an additive that can “form a viscous fluid.” *Id.* at 4:14–17, 4:52–54.

2. *Analysis of Obviousness of Claims 12, 19, and 24–26*

Petitioner asserts that each of the limitations of claim 12 is taught or suggested by at least one of the St. Charles, Tolman, Spruill, and Dobson references. Pet. 8–18. Patent Owner does not dispute the teaching of the limitations of claim 12 in the prior-art references, except for the limitation requiring a “protective case,” which Patent Owner argues is not taught in St. Charles or Spruill. Prelim. Resp. 26–28. Patent Owner concedes that Tolman teaches a protective case but argues that the person of ordinary skill in the art would not have combined Tolman’s case with the teachings of the other references. *Id.* at 28. Finally, Patent Owner argues that Dobson is not analogous art to the ’178 patent. *Id.* at 33–34.

On this last point, we are persuaded that Petitioner has not shown sufficiently that Dobson is analogous to the ’178 patent. As noted above, “[t]o be considered within the prior art for purposes of the obviousness analysis, a reference must be . . . from the same field of endeavor or . . . reasonably pertinent to the particular problem the inventor is trying to solve.” *Circuit Check*, 795 F.3d at 1335. Petitioner does not argue either that Dobson is in the same field of endeavor as the ’178 patent or that it is reasonably pertinent to the problem solved by the ’178 patent’s inventor. Petitioner’s only argument is that Dobson is “in the same field of endeavor” as St. Charles. Pet. 40. Even assuming that Petitioner meant that Dobson is in the same field of endeavor as the ’178 patent, we are not persuaded this is true. Dobson is directed to “well treating fluids for use in the drilling and

servicing of wells in subterranean formations,” which fluids “are useful in various well drilling, workover, and completion operations.” Ex. 1010, 1:7–13. To place this reference in the same field as the ’178 patent, which is directed to devices for controlling the humidity in enclosures such as musical instrument cases and tobacco product packages, would require a broad definition of “field of endeavor” that Petitioner has supported insufficiently with arguments or evidence.

As to the second part of the analogous-art test, Petitioner offers no argument that Dobson is reasonably pertinent to the problem solved by the inventor of the ’178 patent. It therefore is unclear why Dobson would have been commended to the attention of a person of ordinary skill in the art trying to solve the problem of controlling humidity. It may be true, as Petitioner suggests, Pet. 39–40, that, in solving the problem of humidity control, the inventor of the ’178 patent would have been inspired to thicken an aqueous solution for several reasons and that Dobson teaches or suggests thickening an aqueous solution. But this does not mean that a reference about improving the efficacy of well drilling and workover fluids “logically would have commended itself to an inventor’s attention in considering” the problem of humidity control. *See Clay*, 966 F.2d at 659. Without any evidence or argument explaining why it would have done so, we are not persuaded that a person of ordinary skill in the art would have looked to Dobson. Accordingly, Petitioner cannot show obviousness by relying on Dobson.

For this asserted ground, Petitioner relies on Dobson to show the obviousness of each claim. In claim 12, Petitioner relies on Dobson to teach the recited “thickening agent.” Pet. 39–40 (relying on St. Charles to teach a

“thickened salt solution” but on Dobson to teach a “thickener”), 43 (same). The same is true for independent claim 19. *Id.* at 45, 48–49. Accordingly, Petitioner has not presented sufficient evidence of obviousness of either claim 12 or claim 19 to permit us to determine that Petitioner has a reasonable likelihood of prevailing in showing the unpatentability of those claims. Because claims 24–26 depend from claim 19, Ex. 1001, 10:40–49, Petitioner also has not demonstrated a reasonable likelihood of prevailing as to those claims.

*F. Asserted Obviousness over St. Charles and Dobson*

Petitioner argues that claims 31 and 34 are obvious over the combination of St. Charles and Dobson. Pet. 51–56. Petitioner relies on Dobson to show the obviousness of claim 31. *Id.* at 52, 55. As discussed above, Petitioner has not shown sufficiently that Dobson is analogous art to the ’178 patent. Accordingly, Petitioner has not demonstrated a reasonable likelihood of prevailing in showing the obviousness of claim 31. Claim 34 depends from claim 31, and Petitioner relies on Dobson to teach the additional limitation of claim 34. Ex. 1001, 12:3–6; Pet. 56. Thus, Petitioner has not demonstrated a reasonable likelihood of prevailing in showing the obviousness of this claim.

CONCLUSION

Upon consideration of the Petition and the Preliminary Response, we determine that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that any of the claims it challenges are unpatentable. Accordingly, we do not institute *inter partes* review of any of the challenged claims on any of the asserted grounds.

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ORDER

It is hereby

ORDERED that Patent Owner's motion for acceptance of its filing via electronic mail is granted; and

FURTHER ORDERED that the Petition is *denied* as to all challenged claims, and no trial is instituted.

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Patent 5,936,178

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