

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FREE-FLOW PACKAGING INTERNATIONAL, INC.,
Petitioner,

v.

AUTOMATED PACKAGING SYSTEMS, INC.,
Patent Owner.

Case IPR2016-00446
Patent 7,757,459

Before CHRISTOPHER L. CRUMBLEY, JON B. TORNQUIST, 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

Free-Flow Packaging International, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting an *inter partes* review of claims 1, 3, and 4 of U.S. Patent No. 7,757,459 (Ex. 1001, “the ’459 patent”). Automated Packaging Systems, Inc. (“Patent Owner”) filed a Preliminary Response. Paper 6 (“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.

B. Related Matters

The parties have identified *Automated Packaging Systems, Inc. v. Free-Flow Packaging International, Inc.*, No. 5:14-cv-02022 (N.D. Ohio), as a related matter. Pet. 2; Paper 5, 2. In addition, the parties note that related patents are being challenged in IPR2016-00444 (challenging U.S. Patent No. 7,897,220), IPR2016-00445 (challenging U.S. Patent No. 8,425,994), and IPR2016-00447 (challenging U.S. Patent No. 8,357,439). Pet. 2; Paper 5, 2–3.

C. The Asserted Grounds of Unpatentability

Petitioner contends that claims 1, 3, and 4 of the '994 patent are unpatentable under 35 U.S.C. § 103 based on the following grounds (Pet. 40–60):¹

Statutory Ground	Basis	Challenged Claims
§ 103	Fuss ² and Peper ³	1
§ 103	Fuss, Peper, and knowledge of a person of ordinary skill in the art	3 and 4
§ 103	Fuss, Peper, and Simhaee ⁴	3 and 4
§ 103	Fuss and Titchenal ⁵	1
§ 103	Fuss, Titchenal, and knowledge of a person of ordinary skill in the art	3 and 4
§ 103	Fuss, Titchenal, and Simhaee	3 and 4

D. The '459 Patent

The '459 patent relates to a “preformed web and a method of producing dunnage units from the preformed web.” Ex. 1001, at [57]. Specifically, the '459 patent describes “plastic webs of interconnected pouches and processes of converting interconnected pouches to at least one row of dunnage units.” *Id.* at 1:37–39. It also describes “a gap [that]

¹ Petitioner also provides a declaration from Dr. Robert M. Kimmel. Ex. 1003 (“the Kimmel Declaration” or “Kimmel Decl.”).

² Fuss et al., US 2001/0013215 A1, published Aug. 16, 2001 (Ex. 1005, “Fuss”).

³ Peper et al., US 2003/0094395 A1, published May 22, 2003 (Ex. 1006, “Peper”).

⁴ Simhaee, U.S. Patent No. 5,752,666, issued May 19, 1998 (Ex. 1007, “Simhaee”).

⁵ Titchenal et al., U.S. Patent No. 3,791,573, issued Feb. 12, 1974 (Ex. 1008, “Titchenal”).

develops between each pair of adjacent fluid filled pouches” “upon inflation.” *Id.* at 1:40–41. The ’459 patent describes this gap as “run[ning] between an inflation edge line of perforations and a spaced apart opposite edge line of perforations,” with the gap “mak[ing] separating the dunnage units much simpler and easier than separating dunnage units that are connected by a continuous line of un-ruptured perforations.” *Id.* at 1:52–61.

E. Illustrative Claim

Of the challenged claims in the ’459 patent, claim 1 is independent and illustrative. It recites:

1. A process of forming dunnage units from a preformed web, the process comprising:
providing the preformed web, wherein the preformed web includes a plurality of pouch defining seals between top and bottom layers that define a plurality of pouches, wherein the preformed web includes a pocket bounded by the top and bottom layers, an inflation edge of the web, and ends of the pouch defining seals, wherein the preformed web includes an inflation side line of perforations, a spaced apart opposite side line of perforations, and a gap forming area between the inflation side line of perforations and the opposite side line of perforations, wherein the inflation side line of perforations, the opposite side line of perforations, and the gap forming area extend in a direction that is transverse to the inflation edge of the web, the inflation side line of perforations extends between said inflation edge of said preformed web and said gap forming area, the opposite side line of perforations extends between an opposite edge of said preformed web and said gap forming area;
inserting a guide pin into the preformed pocket of the preformed web after the preformed web is formed;
inflating the pouches defined by the preformed web to an inflated volume that causes edges of the gap forming area to spread apart between the preformed inflation side line of

perforations and the preformed spaced apart opposite side line of perforations;

forming an inflation seal across the preformed pouch defining seals to convert the inflated pouches to dunnage units, wherein a portion of the inflation side line of perforations is between the inflation edge and the inflation seal and a portion of the inflation side line of perforations is between the gap forming area and the inflation seal; and

substantially maintaining the inflated volume as the preformed pouches are sealed.

Ex. 1001, 7:34–8:2.

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); *Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. ___, No. 15-446, slip op. at 13 (June 20, 2016). 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). Neither party identifies any terms as requiring construction in order to resolve this matter. We agree with the parties that there are no terms that must 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”).

B. Asserted Obviousness over Fuss and Peper

Petitioner argues that claim 1 is unpatentable under 35 U.S.C. § 103(a) as having been obvious over the combination of Fuss and Peper. Pet. 40–47. Relying on the testimony of Dr. Kimmel, 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.* at 28–32.

1. Fuss

Fuss is directed to a “[s]ystem, method, and material for making pneumatically filled packing cushions.” Ex. 1005, at [57]. Figure 6 of Fuss is reproduced below:

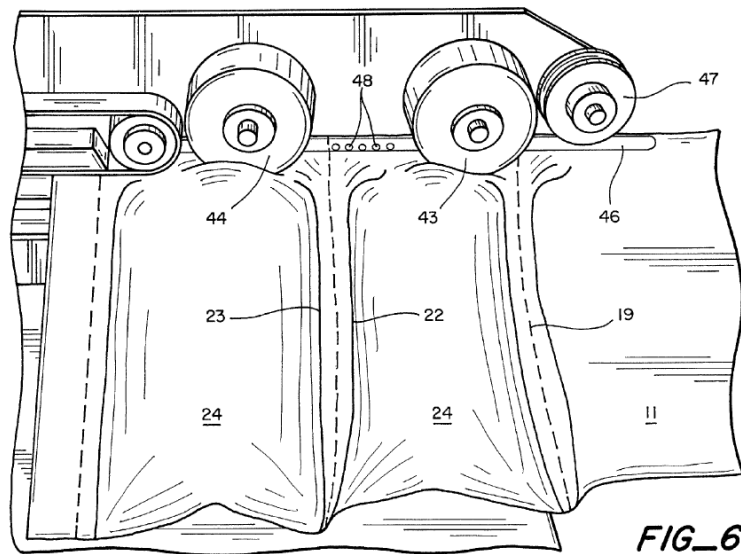


Figure 6 depicts the creation of inflated cushions according to the disclosure of Fuss. Ex. 1005 ¶ 41. Material 11 is fed into the machine of Fuss, where air is injected into chambers 24 via openings 48 in inflation tube 46. *Id.* ¶¶ 39, 41. Chambers 24 are defined by transverse seals along lines 22 and 23, extending from the longitudinal edge of material 11 opposite the inflation edge and terminating “a short distance from” the inflation edge. *Id.*

¶¶ 8, 24. Transversely extending rows of perforations 19 are placed between lines 22 and 23 and extend from one longitudinal edge of material 11 to the other longitudinal edge. *Id.* ¶ 8, 23.

Fuss discloses that inflation tube 46 “is arcuately curved in a horizontal plane so that the film material will follow an arcuate path as it passes through the machine.” *Id.* ¶ 50. Fuss discloses that this is “advantageous in accommodating the changes in shape which occur in the film as the cushions are inflated.” *Id.*; *see id.* ¶ 54 (same disclosure).

2. *Peper*

Peper is directed to an “inflatable packaging system comprised of [sic] an inflation channel that feeds a plurality of inflatable cells [that] prevents buckling of the inflation header as the inflatable cells inflate by relieving stress along a seal line that separates the inflation header from the inflatable cells.” Ex. 1006, at [57]. The system of Peper “is formed from two film layers.” *Id.* ¶ 43. Figure 12 of Peper is reproduced below:

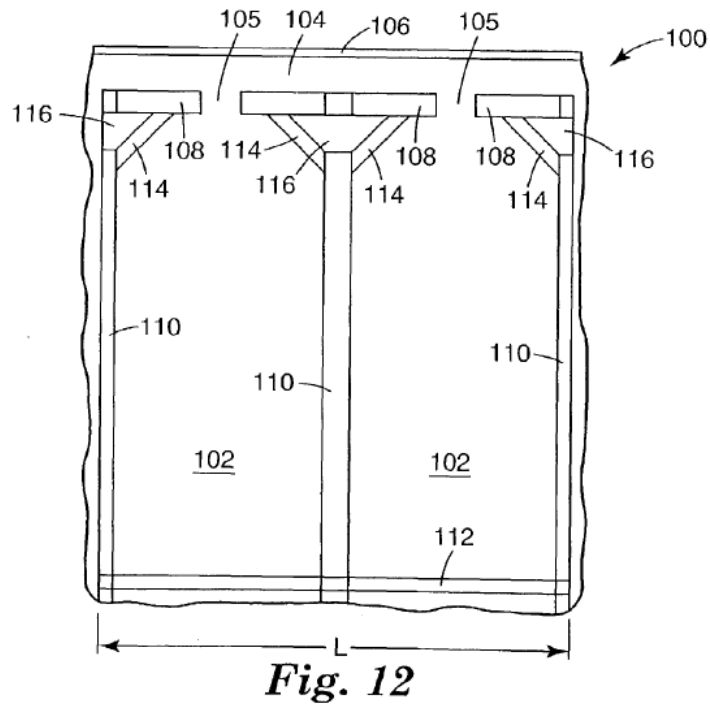


Figure 12 of Peper depicts two inflatable cells 102 formed from two joined film layers. *Id.* Cells 102 are formed by heat seals 108, 110, and 112. *Id.* ¶ 44. Cells 102 are inflated using header 104, which communicates with the interior of cells 102 via inlets 105, which are gaps in heat seal 108. *Id.* ¶¶ 43–44. A separate embodiment of Peper is depicted in Figure 14, reproduced below:

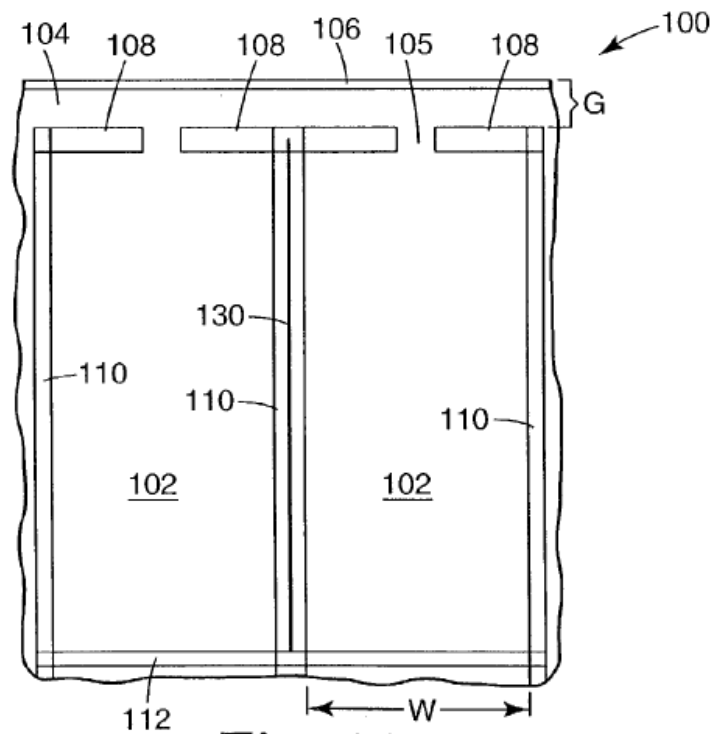


Fig. 14

Figure 14 of Peper depicts two inflatable cells 102, constructed similarly to inflatable cells 102 in Figure 12. *Id.* ¶ 47. As in Figure 12, cells 102 in Figure 14 are formed by heat seals 108, 110, and 112, and cells 102 are inflated via header 104, which communicates with the interior of cells 102 via inlets 105. *Id.* ¶¶ 43–44, 47. In Figure 14,

[e]ach heat seal 110 that separates adjacent cells 102 is provided with a central cut 130 that extends between seal 108 and seal 112. This central cut 130 permits each cell 102 to individually reduce in width W as cells 102 are inflated, such that a gap between adjacent cells 102 forms along cut 130. *Id.* ¶ 47.

3. Analysis of Obviousness of Claim 1

Petitioner asserts that each of the limitations of claim 1 is taught or suggested by at least one of the Fuss and Peper references. Pet. 40–47. In

addition, Petitioner argues that a person of ordinary skill in the art would have combined the teachings of Fuss with those of Peper.

We are not persuaded that Petitioner has made an adequate showing that a person of ordinary skill in the art would have combined Fuss with Peper. Petitioner first argues that one of ordinary skill in the art would have sought to combine Fuss and Peper because “both patents are directed to the same problem—automated, continuous production of sealed, separable, inflatable dunnage units.” Pet. 28. This argument may be enough to demonstrate that the references are analogous art, which requires that the references be either “in the field of the [inventor’s] endeavor or . . . reasonably pertinent to the problem with which the inventor was concerned in order to rely on that reference as a basis for rejection.” *In re Kahn*, 441 F.3d 977, 986–87 (Fed. Cir. 2006) (citing *In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992)). But this similarity among references is not sufficient to demonstrate that a person of ordinary skill in the art would have sought to combine the teachings of the references. Showing this requires “some articulated reasoning with some rational underpinning” to combine the known elements in the manner required in the claim at issue. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). Accordingly, Petitioner’s first argument is insufficient to show that a person of ordinary skill in the art would have combined Fuss with Peper.

Second, Petitioner argues that a person of ordinary skill in the art would have combined the teachings of Fuss with those of Peper because Fuss teaches that “unreliable inflation was largely the result of changes in the shape of the film,” a problem to which Peper offered a solution. Pet. 29–31. Fuss does recognize that the inflation of the cushions causes “changes in

shape . . . in the film,” and it recognizes that this phenomenon should be “accommodat[ed].” Ex. 1005 ¶¶ 50, 54. But Petitioner does not explain why or how Fuss recognizes that this phenomenon is a primary cause of “unreliable inflation.” The only evidence relevant to this issue to which Petitioner directs us is paragraph 67 of Dr. Kimmel’s declaration, which merely parrots the language of the Petition word for word. *Compare* Ex. 1003 ¶ 67, *with* Pet. 30. “Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.” 37 C.F.R. § 42.65(a). And “[m]erely repeating an argument from the Petition in the declaration of a proposed expert does not give that argument enhanced probative value.” *Kinetic Techs., Inc. v. Skyworks Solutions, Inc.*, Case IPR2014-00529, slip op. at 15 (PTAB Sep. 23, 2014) (Paper 8).

Moreover, after noting the change in shape of the film during inflation, Fuss goes on to accommodate this phenomenon through the use of an arcuately curved inflation tube. Ex. 1005 ¶ 50. Given that Fuss already has accommodated the change in shape during inflation, Petitioner does not explain adequately why one of skill in the art would then seek to add additional modifications to the device of Fuss, including the modifications of Peper.

Because Petitioner has not made an adequate showing that a person of ordinary skill in the art would have had a reason to combine Fuss with Peper, we cannot conclude that Petitioner has demonstrated “a reasonable likelihood that the petitioner would prevail with respect to” claim 1 on the ground of obviousness over the combination of Fuss and Peper. 35 U.S.C.

§ 314(b). Accordingly, we do not institute *inter partes* review of claim 1 on this ground.

C. Asserted Obviousness over Fuss, Peper, and Knowledge of a Person of Ordinary Skill in the Art

Petitioner argues that claims 3 and 4 are unpatentable under 35 U.S.C. § 103(a) as having been obvious over the combination of Fuss, Peper, and the knowledge of a person of ordinary skill in the art. Pet. 47–49. Relying on the testimony of Dr. Kimmel, 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.* at 28–32.

This asserted ground of unpatentability relies on the combination of Fuss and Peper. For the reasons discussed above, we are not persuaded that Petitioner has made an adequate showing that a person of ordinary skill in the art would have had a reason to combine Fuss with Peper. Thus, we cannot conclude that Petitioner has shown that “there is a reasonable likelihood that the petitioner would prevail with respect to” claims 3 and 4 on the ground of obviousness over the combination of Fuss, Peper, and the knowledge of a person of ordinary skill in the art. 35 U.S.C. § 314(b). Accordingly, we do not institute *inter partes* review of claims 3 and 4 on this ground.

D. Asserted Obviousness over Fuss, Peper, and Simhaee

Petitioner argues that claims 3 and 4 are unpatentable under 35 U.S.C. § 103(a) as having been obvious over the combination of Fuss, Peper, and Simhaee. Pet. 49–52. Relying on the testimony of Dr. Kimmel, 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.* at 32–34.

1. Simhaee

Simhaee is directed to “[a] roll of plastic bags for use with a dispenser having opposing tracks in which the roll is supported, and a separating tongue for enabling individual bags to be separated from the roll.” Ex. 1007, at [57]. Simhaee discloses separating one plastic bag that is connected to other plastic bags on a roll by perforations, with the separation occurring by engaging a slot between the bag to be separated and the remainder of the roll with a tongue, then pulling the bag to be separated away from the roll. *Id.* at 3:52–65.

2. Analysis of Obviousness of Claims 3 and 4

This asserted ground of unpatentability relies on the combination of Fuss and Peper. For the reasons discussed above, we are not persuaded that Petitioner has made an adequate showing that a person of ordinary skill in the art would have had a reason to combine Fuss with Peper. Thus, we cannot conclude that Petitioner has shown that “there is a reasonable likelihood that the petitioner would prevail with respect to” claims 3 and 4 on the ground of obviousness over the combination of Fuss, Peper, and Simhaee. 35 U.S.C. § 314(b). Accordingly, we do not institute *inter partes* review of claims 3 and 4 on this ground.

E. Asserted Obviousness over Fuss and Titchenal

Petitioner argues that claim 1 is unpatentable under 35 U.S.C. § 103(a) as having been obvious over the combination of Fuss and Titchenal. Pet. 52–58. Relying on the testimony of Dr. Kimmel, Petitioner explains how these references allegedly teach all the limitations of these claims and

9. “The upper extremity 46 of each slit 40 terminates at a point below the upper end 44 of seams 34.” *Id.* at 3:9–10. From upper extremity 46 to the upper edge of bag elements 10, perforations or serrations 50 are provided, with these perforations not weakening the connection between adjacent bag elements as much as slits 38 and 40 do. *Id.* at 3:19–25. When bag elements 10 are filled with product, they “move or distort inwardly along . . . sides 16 and 18.” *Id.* at 4:34. “Such side movement is readily permitted by means of slits 38 and 40 usually accompanied by breaking of lands 42.” *Id.* at 4:37–39. “[A] connection between the bags 10 is maintained for a distance below terminating ends 44 of seams 34 subsequent to filling,” *id.* at 4:45–47, which eliminates or minimizes distortion at the upper ends of the bags during subsequent sealing of the bags, *id.* at 4:49–53.

2. *Analysis of Obviousness of Claim 1*

Petitioner asserts that each of the limitations of claim 1 is taught or suggested by at least one of the Fuss and Titchenal references. Pet. 52–58. In addition, Petitioner argues that a person of ordinary skill in the art would have combined the teachings of Fuss with those of Titchenal.

We are not persuaded that Petitioner has made an adequate showing that a person of ordinary skill in the art would have combined Fuss with Titchenal. Petitioner first argues that one of ordinary skill in the art would have sought to combine Fuss and Titchenal because “both patents are directed to the same problem—automated, continuous production of inflatable, sealed, separable, plastic bag units.” Pet. 35. This argument may be enough to demonstrate that the three references are analogous art, which requires that the references be either “in the field of the [inventor’s] endeavor or . . . reasonably pertinent to the problem with which the inventor

was concerned in order to rely on that reference as a basis for rejection.” *In re Kahn*, 441 F.3d 977, 986–87 (Fed. Cir. 2006) (citing *In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992)). But this similarity among references is not sufficient to demonstrate that a person of ordinary skill in the art would have sought to combine the teachings of the references. Showing this requires “some articulated reasoning with some rational underpinning” to combine the known elements in the manner required in the claim at issue. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). Accordingly, Petitioner’s first argument is insufficient to show that a person of ordinary skill in the art would have combined Fuss with Titchenal.

Second, Petitioner argues that a person of ordinary skill in the art would have combined the teachings of Fuss with those of Titchenal because Fuss teaches that “unreliable inflation was largely the result of changes in the shape of the film,” a problem to which Titchenal offered a solution. Pet. 35–37. Fuss does recognize that the inflation of the cushions causes “changes in shape . . . in the film,” and it recognizes that this phenomenon should be “accommodat[ed].” Ex. 1005 ¶¶ 50, 54. But Petitioner does not explain why or how Fuss recognizes that this phenomenon is a primary cause of “unreliable inflation.” The only evidence relevant to this issue to which Petitioner directs us is paragraph 80 of Dr. Kimmel’s declaration, which merely parrots the language of the Petition word for word. *Compare* Ex. 1003 ¶ 80, *with* Pet. 35–36. Again, “[e]xpert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.” 37 C.F.R. § 42.65(a). And “[m]erely repeating an argument from the Petition in the declaration of a proposed expert does not

give that argument enhanced probative value.” *Kinetic Techs.*, Paper 8, at 15.

Moreover, after noting the change in shape of the film during inflation, Fuss goes on to accommodate this phenomenon through the use of an arcuately curved inflation tube. Ex. 1005 ¶ 50. Given that Fuss already has accommodated the change in shape during inflation, Petitioner does not explain adequately why one of skill in the art would then seek to add additional modifications to the device of Fuss, including the modifications of Peper and Titchenal.

Because Petitioner has not made an adequate showing that a person of ordinary skill in the art would have had a reason to combine Fuss with Titchenal, we cannot conclude that Petitioner has shown that “there is a reasonable likelihood that the petitioner would prevail with respect to” claim 1 on the ground of obviousness over the combination of Fuss and Titchenal. 35 U.S.C. § 314(b). Accordingly, we do not institute *inter partes* review of the challenged claims on this ground.

F. Asserted Obviousness over Fuss, Titchenal, and Knowledge of a Person of Ordinary Skill in the Art

Petitioner argues that claims 3 and 4 are unpatentable under 35 U.S.C. § 103(a) as having been obvious over the combination of Fuss, Titchenal, and the knowledge of a person of ordinary skill in the art. Pet. 58–59. Relying on the testimony of Dr. Kimmel, 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.* at 35–37.

This asserted ground of unpatentability relies on the combination of Fuss and Titchenal. For the reasons discussed above, we are not persuaded that Petitioner has made an adequate showing that a person of ordinary skill in the art would have had a reason to combine Fuss with Titchenal. Thus, we cannot conclude that Petitioner has shown that “there is a reasonable likelihood that the petitioner would prevail with respect to” claims 3 and 4 on the ground of obviousness over the combination of Fuss, Titchenal, and the knowledge of a person of ordinary skill in the art. 35 U.S.C. § 314(b). Accordingly, we do not institute *inter partes* review of claims 3 and 4 on this ground.

G. Asserted Obviousness over Fuss, Titchenal, and Simhaee

Petitioner argues that claims 3 and 4 are unpatentable under 35 U.S.C. § 103(a) as having been obvious over the combination of Fuss, Titchenal, and Simhaee. Pet. 59–60. Relying on the testimony of Dr. Kimmel, 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.* at 37–39.

This asserted ground of unpatentability relies on the combination of Fuss and Titchenal. For the reasons discussed above, we are not persuaded that Petitioner has made an adequate showing that a person of ordinary skill in the art would have had a reason to combine Fuss with Titchenal. Thus, we cannot conclude that Petitioner has shown that “there is a reasonable likelihood that the petitioner would prevail with respect to” claims 3 and 4 on the ground of obviousness over the combination of Fuss, Titchenal, and Simhaee. 35 U.S.C. § 314(b). Accordingly, we do not institute *inter partes* review of claims 3 and 4 on this ground.

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 either of the asserted grounds.

ORDER

It is hereby

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

IPR2016-00446
Patent 7,757,459

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