

Case IPR2023-00580
Patent No. 10,669,738

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GLOBAL SHADE CORPORATION,
Petitioner,

v.

WITH-U E-COMMERCE (SHANGHAI) CO., LTD.,
Patent Owner.

Case IPR2023-00580
Patent 10,669,738

PATENT OWNER'S PRELIMINARY RESPONSE

PURSUANT TO 37 C.F.R. § 42.107

Patent Owner's Preliminary Response

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	LEVEL OF SKILL IN THE ART	3
III.	PROPOSED GROUND 1 FAILS TO ESTABLISH A REASONABLE LIKELIHOOD THAT ANY CHALLENGED CLAIMS ARE UNPATENTABLE	3
A.	Overview of Patent Owner’s Independent Claim 1	4
B.	Petitioner’s Proposed Ground Is Deficient With Regard to Limitation [D][3][iii] of Independent Claim 1	7
C.	Even if Tsai is Incorporated, the Proposed Ground Is Still Deficient With Regard to Limitation [D][3][iii] of Independent Claim 1	10
D.	Incorporation of Tsai’s Outer Units and X-shaped Rod Members Would Prevent Rousselle From Folding and the Proposed Combination Would be Inoperable	12
1.	Independent Claim 1	13
2.	Dependent Claim 2	20
3.	Dependent Claims 4 and 14	22
E.	Conclusion on Ground 1	22

IV. PETITIONER HAS NOT SHOWN A LIKELIHOOD OF SUCCESS ON	
GROUND 2.....	23
V. COLLATERAL ESTOPPEL DOES NOT APPLY	25
A. Collateral Estoppel Standard	26
B. The Issues are Not the Same	26
C. The Remaining Factors Cannot be Met.....	29
D. Conclusion	30
VI. THE PETITION SHOULD BE DENIED UNDER 35 U.S.C. § 325(d).....	30
A. Discretionary Denial Standard	30
B. The Same or Substantially the Same Art Previously Was Presented to the	
Office	32
1. Rousselle Was Presented to the Office and Considered by the Examiner..	32
2. Tsai Is Cumulative of References Raised By the Examiner	34
C. Petitioner Has Not Demonstrated Any Office Error	37
D. Conclusion	39
VII. THE PETITION SHOULD BE DENIED UNDER § 314 (<i>Fintiv</i> Factors) ..	40
VIII. CONCLUSION	41

TABLE OF AUTHORITIES

Cases

<i>Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GmbH</i> , IPR2019-01469, Paper 6, 8 (PTAB Feb. 13, 2020) (precedential)	31
<i>Apple v. Fintiv</i> , IPR2020-00019, Paper 11, 14–16 (PTAB Mar. 20, 2020)	40
<i>B&B Hardware, Inc. v. Hargis Indus., Inc.</i> , 575 U.S. 138, 153–54 (2015)	26
<i>Becton, Dickinson & Co. v. B. Braun Melsungen AG</i> , IPR2017-01586, Paper 8, 17–18 (PTAB Dec. 15, 2017)	32
<i>Bourns, Inc. v. United States</i> , 537 F.2d 486, 493 (Fed. Cir. 1976)	28
<i>Cook Grp., Inc. v. Boston Sci. Scimed, Inc.</i> , 809 F. App’x 990, 1000 (Fed. Cir. 2020)	12
<i>DuPuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.</i> , 567 F.3d 1314, 1326 (Fed. Cir. 2009)	12
<i>Harmonic Inc. v. Avid Tech, Inc.</i> , 815 F.3d 1356, 1367 (Fed. Cir. 2016)	30
<i>In re Freeman</i> , 30 F.2d 1459, 1465 (Fed. Cir. 1994)	26
<i>Ohio Willow Wood Co. v. Alps S., LLC</i> , 735 F.3d 1333, 1342 (Fed. Cir. 2014)	25
<i>Pharmacia & Upjohn Co. v. Mylan Pharm., Inc.</i> , 170 F.3d 1373, 1379 (Fed.Cir.1999)	25

<i>Regeneron Pharms., Inc. v. Merus N.V.</i> , 864 F.3d 1343, 1350 (Fed. Cir. 2017)	34
<i>Regents of the Univ. of Calif. v. Eli Lilly & Co.</i> , 119 F.3d 1559, 1575 (Fed. Cir. 1997).....	34
<i>Rimfrost AS v. Aker Biomarine Antarctic AS</i> , IPR2020-01534 (Paper 25 at 14–19) (PTAB May 18, 2022)	27
<i>Soverain Software LLC v. Victoria’s Secret Direct Brand Mgmt., LLC</i> , 778 F.3d 1311, 1319 (Fed. Cir. 2015).....	27
<i>SynQor, Inc. v. Vicor Corp.</i> , 988 F.3d 1341, 1353 (Fed. Cir. 2021)	26

Statutes

35 U.S.C. § 102(b)	1
35 U.S.C. § 103	1
35 U.S.C. § 314.....	1
35 U.S.C. § 314(a)	32
35 U.S.C. § 325(d)	32, 33
37 C.F.R. § 42.107	1
37 C.F.R. § 42.107(b)	1
37 C.F.R. § 42.108(c).....	3

LIST OF EXHIBITS

Exhibit No.	Description
2001	Non-Final Office Action, September 26, 2019 (with accompanying Notice of References Cited, Search Notes, and EAST Search History)
2002	Non-Final Office Action, September 28, 2018
2003	U.S. Patent Publication No. 2015/0308147 (“Lee”)
2004	U.S. Patent No. 6,929,017 (“Byun”)
2005	Office Action Response, February 10, 2020
2006	Notice of Allowance, February 27, 2020

I. INTRODUCTION

Pursuant to 37 C.F.R. § 42.107 and in response to Petitioner Global Shade Corporation’s (“Global Shade” or “Petitioner”) PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 10,669,738 (Paper No. 2 (“Pet.”)) in Case IPR2023-00580, With-U E-Commerce (Shanghai) Co., Ltd. (“Patent Owner”) files this Patent Owner Preliminary Response setting forth the reasons why no *inter partes* review should be instituted under 35 U.S.C. § 314. This preliminary response is filed within three months of the NOTICE OF FILING DATE ACCORDED TO PETITION (Paper No. 3) issued February 17, 2023 and as required by Rule 42.107(b).

The ’738 Patent claims an innovative “**collapsible canopy frame**” that is permitted to collapse when its “central lock” is unlocked. *See* Ex. 1001, 10:7–35. Petitioner alleges that claims 1, 2, 4, and 14 of the ’738 Patent are invalid under § 103 based on a combination of two old canopy frames (Rousselle in view of Tsai) (Ground 1) and that claims 4, 13, and 14 are invalid under 35 U.S.C. § 103 based on further combination of the old canopies from Ground 1 with an additional reference to an old lock on the handle of a baby-stroller (Ohnishi) (Ground 2).

However, Petitioner's proposed combinations are deficient with respect to the challenged claims. Specifically, for both Grounds, Petitioner has not shown how the old canopies teach the structural limitations of the claimed "**collapsible canopy frame**." Further, Petitioner's proposed combination of old canopies would not be operable to achieve the claimed embodiments. Accordingly, Petitioner has failed to demonstrate a reasonable likelihood any challenged claim is unpatentable.

Further, Petitioner's reliance on collateral estoppel is misplaced. The issues discussed above with respect to the challenged claims have never been raised or litigated and certainly have not been judicially resolved. Instead, the Board should consider the merits of the Petition, including the clear flaws in the proposed grounds of rejection, and deny institution.

Finally, Petitioner's cited references have already been considered by the Office or are merely cumulative of references applied during examination and the Office found them insufficient to reject the claims. Thus, the Board should exercise its discretion to deny institution.

II. LEVEL OF SKILL IN THE ART

A person of ordinary skill in the art would have had a Bachelor's degree in mechanical engineering and two years of relevant experience. A recipient of other academic degrees may qualify as a person of ordinary skill if they have taken coursework or have experience in a pertinent technology. Additional education could offset less work experience; additional work experience could offset less education or coursework.

III. PROPOSED GROUND 1 FAILS TO ESTABLISH A REASONABLE LIKELIHOOD THAT ANY CHALLENGED CLAIMS ARE UNPATENTABLE

Pursuant to 37 C.F.R. § 42.108(c), Petitioner must demonstrate a reasonable likelihood that a challenged claim is unpatentable. Petitioner's first proposed ground of unpatentability is that challenged claims 1, 2, 4, and 14 are unpatentable as obvious over Rousselle in view of Tsai (Ground 1). Pet. 9. However, the combination of Rousselle and Tsai fails to teach material limitations of the claims, and even if the references were combined as proposed by Petitioner, would be inoperable.

A. Overview of Patent Owner's Independent Claim 1

Independent claim 1 is directed to a collapsible canopy frame that is defined by four elements:

[A] supporting legs;

[B] outer retractable units with hinged X-shaped rod members;

[C] inner retractable units (forming a roof together with the outer retractable units); and

[D] a central lock.

Limitation [B] includes specific structure for the outer retractable units connecting the supporting legs together, requiring:

a plurality of outer retractable units, **each outer retractable unit connected between two adjacent supporting legs, each said outer retractable unit comprises a plurality of hinged X-shaped rod members, each X-shaped rod member comprises a first eave pipe and second eave pipe hinged to one another.**

Ex. 1001, 10:8–14 (emphasis added). Limitation [D] includes specific functional relationships between the components, for example, limitation [D][3][iii] recites:

...wherein said central lock locks said **collapsible canopy frame** in an unfolded state when said central lock is locked and permits said **collapsible canopy frame** to be folded into a folded state when said central lock is unlocked.

Id. at 10:29–35 (emphasis added).¹

Thus, independent claim 1 requires specific structure for the outer retractable units (X-shaped rod members) and also requires that the central lock interacts with the **entirety** of the defined collapsible canopy frame (which includes the supporting legs, **the outer retractable units with X-shaped rod members**, and the inner retractable units forming a roof) to create a folded state and an unfolded state for the collapsible canopy frame. The '738 Patent shows an embodiment of the folded state in Figure 20:

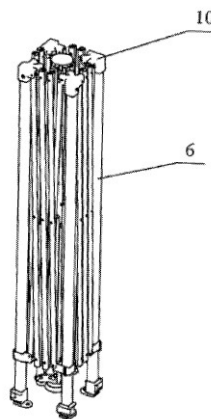


FIG. 20

¹ Limitations [B] and [D][3][iii] were not present in the challenged claims of the '710 Patent, as admitted by Petitioner, Pet. 91–92, and thus are at issue for the first time in this proceeding. *See infra* § V(B) further discussing how these are new limitations that alter the analysis.

As clearly shown, the entirety of the collapsible canopy frame (including each of the claimed limitations [A]–[D]) is folded together. This folded state is described in detail in the '738 Patent:

When the canopy is folded, the locking piece 4 is moved such that the inner wall of the first through hole 41 of the locking piece 4 is separated from the clamping groove 21, at this point, the clamp locking part 22 can pass through the first through hole 41, and the center pole 2 also can move out of the center bottom cap 3 to separate the center pole 2 from the center bottom cap 3; and thereafter, force is applied to pull the center bottom cap 3 away from the center pole 2, i.e., the center bottom cap 3 is pulled downwards to enable the inner retractable units 8 to be folded towards the central lock, as illustrated in FIG. 19, **finally the outer retractable units 7 are gradually folded and the plurality of supporting legs 6 are folded towards the central lock, as illustrated in FIG. 20.** To sum up, the canopy mounted with the central lock of the present invention **is very convenient to be unfolded or folded, has good support effect and high strength after the canopy is unfolded, and has long service life.** The central lock is simple in structure, easy to manufacture and low in cost.

Ex. 1001, 4:59– 5:10 (emphasis added). As the '738 Patent explicitly states and shows in Fig. 20, the outer retractable units, **including the X-shaped rod members**, must be foldable towards the central lock in this folded state. *Id.* at Fig. 20. Still further, the '738 Patent describes the design consideration as having “good support effect and high strength” and “a long service life.” *Id.* at 5:7–9. A critical feature of these design considerations is ensuring the robust nature of the

system (i.e., good support, high strength and long service life) which is enabled by the support provided by the claimed X-shaped outer retractable rods.

Creating such a robust collapsible canopy that satisfies these design considerations with the convenience of the folded state was no small advancement in the art of canopy design. Further, it is an advancement that is not realized, and cannot be realized, by Petitioner's proposed combination of references as discussed in detail in the following sections.

B. Petitioner's Proposed Ground Is Deficient With Regard to Limitation [D][3][iii] of Independent Claim 1

The Petition is deficient because Petitioner fails to properly address Limitation [D][3][iii] in the Petition. In connection with Limitation [D][3][iii] "...wherein said central lock locks said collapsible canopy frame in an unfolded state when said central lock is locked and permits said collapsible canopy frame to be folded into a folded state when said central lock is unlocked," Petitioner states:

Rousselle discloses that a user sets up its canopy by first moving it to an unfolded state. Ex. 1003, 13:5-29; Ex. 1002 ¶123. Once in an unfolded state, and with the central lock engaged, "the upper and lower devices are securely locked together via the locking mechanism 700," and thus "the frame is securely locked via the locking mechanism 700." Ex. 1003, 13:30-41. Thus, the central lock locks Rousselle's collapsible canopy frame in an unfolded state when the central lock is locked. Ex. 1002 ¶123.

When the central lock is unlocked (for example, before the canopy is erected), the frame is in “an initially collapsed state.” Ex. 1003, 13:5-8. This is shown in Figure 1(D), which shows the upper and lower clevises (e.g., center top cap and center bottom cap) separated and the central lock unlocked:

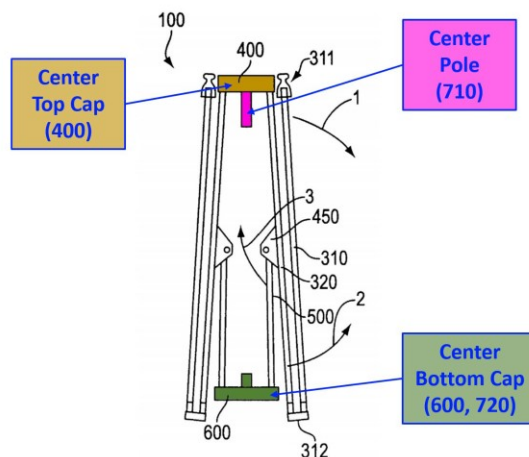


FIG. 1(D)

Id., Fig. 1(D). A POSITA would have understood that the frame could be returned to this collapsed (e.g., folded) state whenever the center lock is unlocked. Ex. 1002 ¶125. Thus, Rousselle discloses this limitation. *Id.* ¶¶122-25.

Pet. 45–46.

Petitioner fails to address that Limitation [D][3][iii] requires **all of the collapsible canopy frame (including each of the claimed limitations [A]–[D])** in the collapsed/fold state. **In fact, Petitioner relies solely on Rousselle’s Figure 1(D), which explicitly does not teach Limitation [D][3][iii].** The cited Figure 1(D) of Rousselle does not satisfy any of the design considerations or structural details required in Limitation [D][3][iii], namely, that all elements of the

collapsible canopy frame are in the folded state. This is because Rousselle fails to teach or suggest any outer retractable units in the collapsed state, as tacitly admitted by Petitioner (Petitioner did not cite Rousselle for Limitation B, but only cited Tsai, and then acknowledged that the combination required addition of an element to Rousselle, Pet. 14–22). It is much easier to design a foldable structure and locking mechanism when minimal structural elements are used and high strength structural elements (i.e. the X-shaped rod members) are not present and thus do not need to be considered in the folded state.

Rousselle is not cited by the Petition for, and does not teach, Limitation [B] (outer retractable units comprising X-shaped rod members) and thus fails to anticipate Patent Owner’s comprehensive folding/unfolding and locked/unlocked states (for the canopy as a whole and including the X-shaped rod members) as recited in Limitation [D][3][iii]. Petitioner does not even attempt to incorporate Tsai for Limitation [D][3][iii]. Pet. 45–46 (citing only Rousselle). In fact, the Petition does not mention Tsai or any combination or incorporation at all on this limitation. *Id.* Even if the Petition did propose a combination of Rousselle with Tsai, such a combination would still be silent regarding robust outer units with X-shaped rod members as used in the Patent Owner’s invention in connection with both a collapsed state and an expanded state.

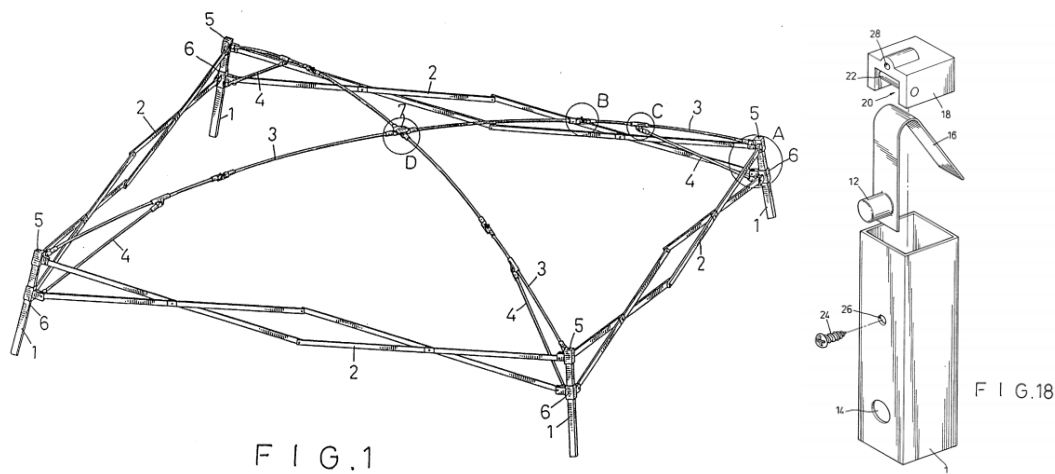
Review of Rousselle’s Figure 1(D) and related teachings of Rousselle clearly demonstrates that this reference alone is insufficient to teach the pertinent limitations of Patent Owners’ claim 1. Accordingly, Petitioner’s proposed Ground 1 rejection of independent claim 1 is deficient on its face and fails to present a proper case for obviousness and therefore for invalidity. Instead, the Petition fails to demonstrate a reasonable likelihood of invalidating Patent Owner’s independent claim 1.

C. Even if Tsai is Incorporated, the Proposed Ground Is Still Deficient With Regard to Limitation [D][3][iii] of Independent Claim 1

As discussed above, the Petition has failed to properly address pertinent limitations of independent claim 1; however, even if the Board overlooks the deficiency of the Petition and turns to Tsai, the proposed ground is still deficient because the resulting structure would not be permitted to fold based on the central lock. Instead, user action to disengage a plurality of locks is required.

Petitioner asserts that one of skill would have been motivated to include Tsai’s outer retractable units in Rousselle’s canopy to improve the stability of the structure. Pet. 21. However, Petitioner’s argument for motivation to combine omits that Tsai further teaches that in the stable orientation “the sliding connectors 6 will be locked in place by the locking assemblies 10.” Ex. 1005, 10:34–11:1; *see*

also id. at 8:5–8. Thus, Petitioner’s proposed combination would have X-shaped members with a locking assembly 10 [on each leg 1] which locks the sliding connector 6 in place. *Id.* at 8:5–8; 10:34–11:1. The relevant structure is depicted below:



Tsai, Figures 1, 18.

As such, the combination proposed by Petitioner would necessarily include locks on each leg and would not be permitted to fold based only on the central lock. Accordingly, Rousselle and Tsai would not meet the limitations of [D][3][iii] because the additional locks of Tsai would prevent the center lock of Rousselle from permitting the collapsible canopy frame to be folded.

D. Incorporation of Tsai's Outer Units and X-shaped Rod Members Would Prevent Rousselle From Folding and the Proposed Combination Would be Inoperable

As discussed above, the Petition has failed to properly address pertinent limitations of independent claim 1; however, even assuming *arguendo* that Rousselle could be interpreted as teaching the limitations not addressed in the Petition, or that Tsai could somehow be incorporated for them, Petitioner's proposed combination would be inoperable for the intended function of a collapsible canopy as recited in the challenged claims.

Under Federal Circuit case law, "where the prior art's teachings undermine the very reason being proffered as to why a person of ordinary skill would have combined the known elements," there is a strong case for non-obviousness. *DuPuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1326 (Fed. Cir. 2009). Likewise, "the loss of key functions in the primary reference" and resulting inoperability weighs heavily against any motivation to combine. *Cook Grp., Inc. v. Boston Sci. Scimed, Inc.*, 809 F. App'x 990, 1000 (Fed. Cir. 2020). In fact, as clearly stated in *Cook Grp.*, "where the motivation to combine rests on a modification alleged to improve the primary reference, ... the Board may consider whether the modification renders the reference inoperable for its intended function" when analyzing assertions of obviousness. *Id.* at 1000.

1. Independent Claim 1

As discussed above and referring again to Patent Owner's Figure 20 reproduced below, the collapsible canopy of independent claim 1 can fold into a fully collapsed state and must be configured to do so.

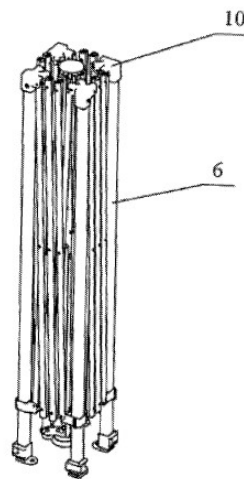


FIG. 20

Ex. 1001, 10:29–33, Fig. 20.

Petitioner cites Rousselle's Figure 1(D) as allegedly teaching similar collapsing, and refers to that figure, for example, in the overview of Rousselle and in analyzing Limitations [C], [D][1], [D][2], [D][3], and [D][3][iii]. Pet. 10–11, 24–25, 37–43, and 45–46. Figure 1(D) is reproduced below:

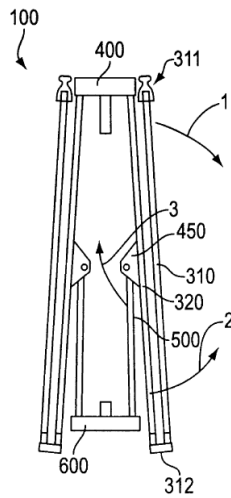


FIG. 1(D)

Ex. 1003, Fig. 1(D). Absent from the Petition is any explanation of how this folded configuration would still be achievable in combination with the limitations from claim 1 that are allegedly taught in Tsai. The Petition relies on Tsai as teaching the outer retractable units found in limitation [B] of independent claim 1. Pet. 14–22. Combining the structural members 104,108 of Tsai, as Petitioner suggests, would prevent Rousselle’s folded configuration cited by Petitioner in Rousselle, Figure 1(D). As described in more detail below, the proposed combination would therefore cause the Rousselle device to be inoperable.

Limitation [B] of independent claim 1 requires:

...a plurality of outer retractable units, each outer retractable unit connected between two adjacent supporting legs, each said outer retractable unit comprises a plurality of hinged X-shaped rod members, each X-shaped rod member comprises a first eave pipe and second eave pipe hinged to one another...

Ex. 1001, 10:9–14. The Petition relies exclusively on the secondary reference of Tsai as teaching the plurality of outer retractable units as claimed. Pet. 18–20. Contrarily, for the purposes of analyzing the folded state of claim 1, (Limitation [D][3][iii]), the Petition ignores that Tsai has been relied on for teaching the outer retractable units an X-shaped rod members. Instead, the Petition relies only on Rousselle’s folded state. However, Rousselle’s folded state could not be possible in combination with Tsai.

As clearly shown in Figure 1(D) of Rousselle, the leg tubes 310 (identified by Petitioner as the supporting legs, Pet. 12–13) extend from feet 311 to hinge 312. Ex. 1003, Fig. 1(D). Importantly, in the folded configuration, the leg tubes 310 pivot 180 degrees on the hinge 312 such that the feet 311 are at the top of the folded device. The result of this transition is depicted in Figure 1(D) in which the feet 311 are proximate to element 400 (identified by Petitioner as the center **top** cap, Pet. 37–39). Further, Rousselle teaches, and Figure 1(D) shows, that when the device is to be unfolded and the canopy erected, the leg tube 310 must rotate downward following arrow 1. *Id.* at 13:5–21, Fig. 1(D). Rousselle’s user can also swing the band bars 320 (identified by Petitioner as the inner retractable units, Pet. 23–25) upward following arrow 2. *Id.* at 13:8–21, Fig. 1(D). Movement of the leg

tubes 310 and the band bars 320 is made possible by hinge 312. *Id.* at 6:54–64, Fig. 1(D).

In summary, Rousselle's leg tubes 310 and feet 311 move from pointing upward and being proximate to the top of Rousselle's device and the alleged center **top** cap 400, to pointing downward and forming the lowest portion of Rousselle's device, for example, contacting the ground and being located well below the alleged center **bottom** cap 600 as shown in Rousselle's Figure 1(A), 1(B), and 1(C). Figure 1(A) is reproduced below:

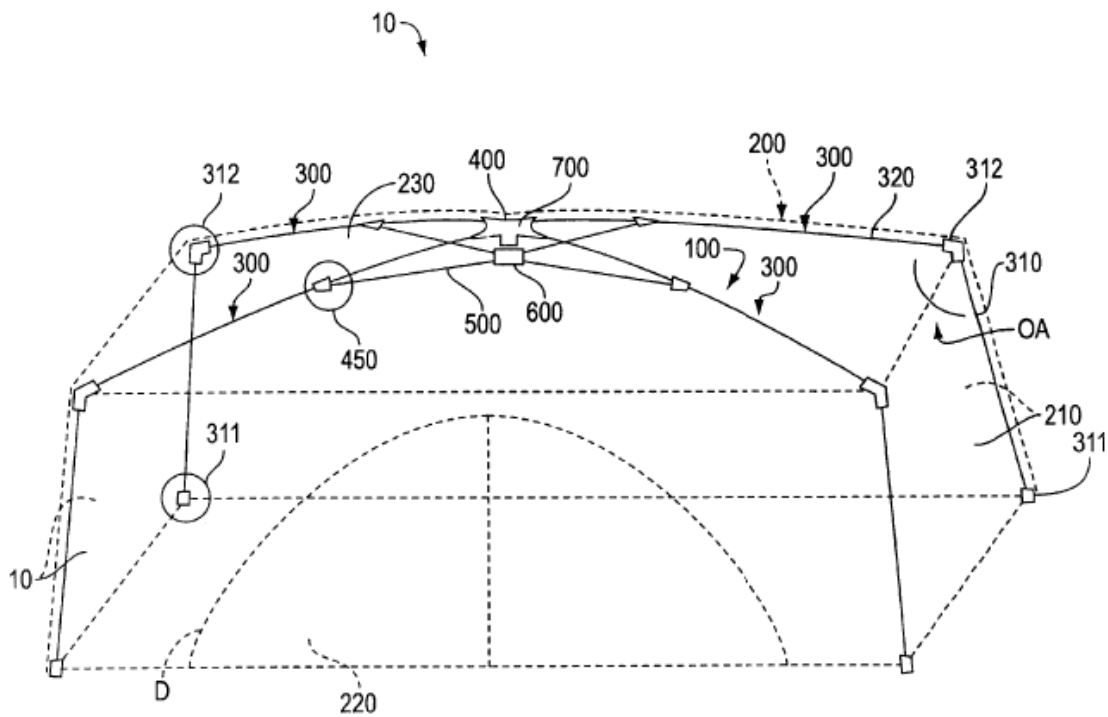


FIG. 1(A)

Id. at Fig. 1(A).

As discussed above, the only X-Shaped rod members cited by Petitioner are those found in Tsai. Petitioner proposes including Tsai's alleged outer units, including alleged X-shaped rod members on Rousselle's canopy in Figures 1(A)–(D). Pet. 14–22. However, while asserting Tsai teaches the X-shaped rod members and offering rationale for why one of skill in the art might use X-shaped rod members such as Tsai's, Pet. 14–22, **Petitioner tellingly omits any explanation of how the X-shaped rod members can successfully be incorporated into Rousselle's structure while maintaining operability. Petitioner's expert similarly fails to explain how this could be done and what the resulting structure would look like.** This is because the modification proffered by Petitioner as a mere “simple addition”, Pet. 21, would not be so simple. In reality, it would cause Rousselle's shelter/tent to be inoperable.

As discussed above, Rousselle relies on a hinged structure in which the leg tubes 310 (alleged to be supporting legs) pivot or swing to transition from a substantially downward-facing orientation below the alleged center **bottom** cap to an almost completely upward-facing orientation even with or proximate to, the alleged center **top** cap. Ex. 1003, Fig. 1(D). The “simple addition” of an outer unit with an X-shaped rod member would now present several additional attachment points (for example, four additional attachment points) for each leg

tube 310. As shown in Patent Owner's Figure 19 reproduced below, the X-shaped rod members connect the supporting legs and provide structural support:

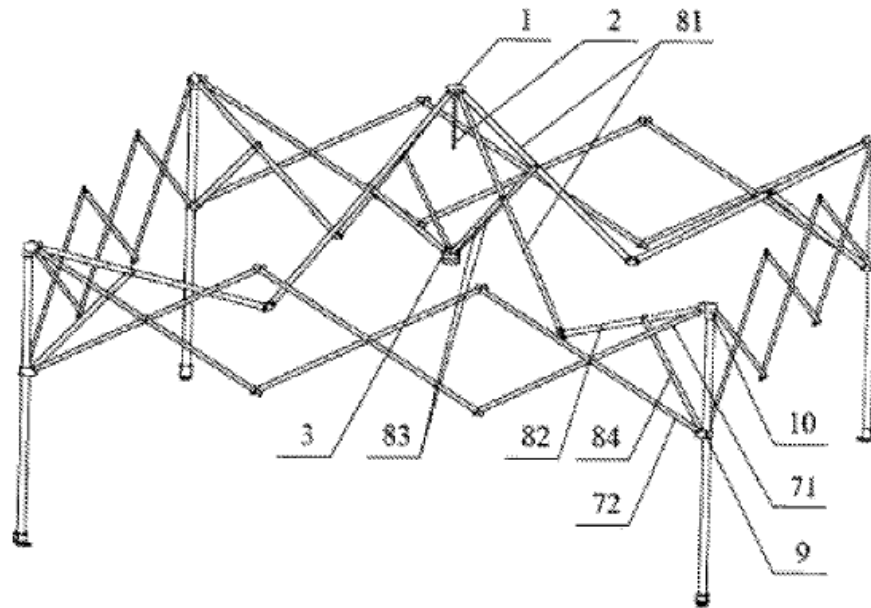


FIG. 19

Ex. 1001, Fig. 19. Independent claim 1 recites the feature of “each outer retractable unit connected between two adjacent supporting legs.” Ex. 1001, 10:9–11. Thus, even as interpreted by Petitioner, each set of adjacent leg tubes 310 **must be connected together with an X-shaped rod member from Tsai** and therefore **each leg tube 310 must be connected to two other leg tubes 310 by respective X-shaped rod members from Tsai**. Each leg tube 310 would thus have four (4) additional attachment points providing connections to structural members extending orthogonally from each other.

The leg tubes 310 so connected by X-shaped rod members from Tsai are not capable of swinging upward as taught by Rousselle and as depicted in Figure 1(D). Petitioner has not offered any explanation for how such motion could even be physically possible. Instead, the proposed modified device would no longer be capable of having the leg tubes 310 invert to accomplish the folding.

Moreover, the structure resulting from the proposed modification of Rousselle with Tsai would be distinct from the structure of Patent Owner's independent claim 1 which does not require inverting the supporting legs to achieve a folded state. *See* Ex. 1001, Figs. 19 and 20. Patent Owner's claimed structure (without inverting legs) allows the outer retractable units with X-shaped rod members to serve as structural supports without preventing transition into the folded state. Contrarily, Petitioner does not offer any explanation for how Rousselle and Tsai could be combined to arrive at such structure, i.e., without requiring legs that invert and without restricting/preventing folding.

For at least these reasons, Patent Owner respectfully contends that incorporating Tsai's alleged X-shaped rod members into Rousselle's device would result in a device that would be incapable of undergoing the folding taught by Rousselle, would therefore be inoperable, and certainly would not meet the limitations of independent claim 1 (for example, the collapsible canopy of the

preamble, the X-shaped rod members of Limitation B, and the details of the folded/unfolded state in Limitation [D][3][iii] together). Accordingly, Petitioner has not, and cannot, show a reasonable likelihood that independent claim 1 is unpatentable based on the proposed ground.

2. Dependent Claim 2

Claim 2 depends from independent claim 1, and the Petition suffers from the same defects.

Further, claim 2 requires even further structural limitations that would also prevent folding if incorporated into Rousselle. For example, claim 2 recites that each said supporting leg comprises a sliding sleeve for moving along a length of said respective supporting leg. Ex. 1001, 10:36–51. The sliding sleeve also connects with a second eave pipe and a second connecting rod as shown in Patent Owner's Figure 18 reproduced below:

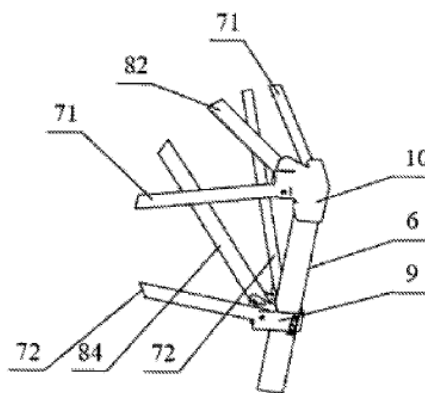


FIG 18
20

Ex. 1001, 10:49–51, Fig. 18.

Petitioner alleges Tsai teaches similar structure. Pet. 49–50. However, Petitioner has again failed to provide any explanation for how this sliding sleeve and yet further attachment points would be operable in combination with Rousselle's device. As explained above with respect to independent claim 1, Rousselle's alleged supporting leg (leg tube 310) must completely invert by swinging almost 180 degrees from the downward-facing, ground-contacting position, to the upward-facing position proximate the center **top** cap 400. Further, as discussed above, incorporation of Tsai's X-shaped rod members would not permit this movement.

Turning back to dependent claim 2, Petitioner has not explained how the alleged sliding sleeve and two additional support structures (second eave pipe and second connecting rod) would be operable with a supporting leg/leg tube that undergoes the inversion movement of Rousselle. Instead, Patent Owner respectfully contends these additional attachment points are yet further structural elements that would make that movement impossible and the proposed modified device incapable of folding.

Accordingly, Petitioner's proposed combination would also not be operable to arrive at the limitations of dependent claim 2 and Petitioner has not demonstrated a reasonable likelihood of unpatentability.

3. Dependent Claims 4 and 14

Patent Owner respectfully contends the analysis presented above with respect to independent claim 1 applies with equal force to dependent claims 4 and 14 and the Petition suffers from the same defects with respect to these claims. Thus, Petitioner has not shown a reasonable likelihood of unpatentability.

E. Conclusion on Ground 1

For at least these reasons, Petitioner has not satisfactorily shown how Rousselle teaches the pertinent limitations nor how the combination of Rousselle and Tsai could be operably combined to arrive at independent claim 1. Likewise, Petitioner has not shown how the proposed combination would be operable with respect to dependent claim 2. Claims 4 and 14 depend from independent claim 1 and the Petition is defective with respect to these claims as well.

In light of the deficiencies in the Petition's proffered rejection and the clear inoperability of the proposed combination, the Petitioner has not demonstrated a likelihood of success in invalidating the challenged claims.

The Board should deny Ground 1 of the Petition.

IV. PETITIONER HAS NOT SHOWN A LIKELIHOOD OF SUCCESS ON GROUND 2

Petitioner's second proposed ground of unpatentability is that challenged claims 4, 13, and 14 are unpatentable as obvious over Rousselle in view of Tsai further in view of Ohnishi (Ground 2). Pet. 74. Claim 4 depends from independent claim 1 and therefore includes the limitations of that claim. Ex. 1001, 11:1–17. Claims 13 and 14 depend from claim 4 and therefore include the limitations of that claim and independent claim 1. Ex. 1001, 11:37–47.

As characterized by the Petitioner, Ground 2 incorporates the proposed combination of Rousselle and Tsai presented in Ground 1, while replacing Rousselle's lock with Ohnishi. Pet. 75–76. Accordingly, Petitioner does not present a full analysis of the structure of the canopy (to avoid repetition) and only discusses Ohnishi's lock. Pet. 75–76.

In response, Patent Owner also avoids any repetitious discussion of Rousselle and Tsai, and only notes that Ground 2 would be deficient and inoperable for the same reasons discussed with respect to Ground 1.

Further, with respect to Ohnishi specifically, Patent Owner does not admit the reference teaches the recited limitations of the locking piece.² However, for the purposes of this Preliminary Response, Patent Owner contends the Ohnishi reference does not relate to canopies and thus does not and cannot remedy any of the deficiencies with the structures of Rousselle and Tsai or provide any insight into how the proposed structural combination could be operable.

Accordingly, Petitioner has not satisfactorily shown how the combination teaches the pertinent limitations nor how the combination could be operably combined to arrive at the claims.

In light of the deficiencies in the Petition's proffered rejection and the clear inoperability of the proposed combination, the Petitioner has not demonstrated a likelihood of success in invalidating the challenged claims.

The Board should deny Ground 2 of the Petition.

² In fact, Patent Owner notes the Board previously upheld the patentability of Claim 7 of the parent '710 Patent, finding that Petitioner failed to show that Ohnishi discloses or suggests the pertinent structure. Ex. 1016, at 76–77.

V. COLLATERAL ESTOPPEL DOES NOT APPLY

Collateral estoppel acts to protect a party from the burden of “having to litigate issues that have been fully and fairly tried in a previous action and adversely resolved against a party-opponent.” *Ohio Willow Wood Co. v. Alps S., LLC*, 735 F.3d 1333, 1342 (Fed. Cir. 2014) (citing *Pharmacia & Upjohn Co. v. Mylan Pharm., Inc.*, 170 F.3d 1373, 1379 (Fed.Cir.1999)).

In asserting that collateral estoppel compels a finding of unpatentability of the different claims at issue in the instant proceeding, Petitioner seeks to expand this limited protection beyond the scope of the previous *inter partes* review and to issues and claim limitations which have not yet been raised in any way, much less fully and fairly tried.

In fact, if collateral estoppel is adopted by the Board as requested by Petitioner, Patent Owner would be prevented from making arguments defending the patentability of issued claims that Petitioner has admitted contain additional limitations that were not present in the previously reviewed claims and that have never been reviewed by the Board or any entity other than the Examiner who allowed the '738 Patent.

A. Collateral Estoppel Standard

Collateral estoppel applies in patent cases when:

- (1) the issue is identical to the one decided in the first action;
- (2) the issue was actually litigated in the first action;
- (3) resolution of the issue was essential to a final judgment in the first action; and
- (4) [the party] had a full and fair opportunity to litigate the issue in the first action.

SynQor, Inc. v. Vicor Corp., 988 F.3d 1341, 1353 (Fed. Cir. 2021) (quoting *In re Freeman*, 30 F.2d 1459, 1465 (Fed. Cir. 1994)).

B. The Issues are Not the Same

As evident from the factors listed above, determining the pertinent “issue” is a critical first step in determining whether collateral estoppel applies. Even though the claims are not required to be identical in order to involve the same issue, the application of collateral estoppel is only proper when the issues are “indeed identical” and the rules are “carefully observed.” *See B&B Hardware, Inc. v. Hargis Indus., Inc.*, 575 U.S. 138, 153–54 (2015) (quotations omitted). Put differently, collateral estoppel applies “to prevent repetitious litigation of what is *essentially* the same dispute.” *Id.* at 157 (emphasis added) (quotations and citations omitted).

Turning specifically to patent issues, the presence of additional claim limitations that were not previously addressed demonstrates the existence of a different question/issue. *See Rimfrost AS v. Aker Biomarine Antarctic AS*, IPR2020-01534 (Paper 25 at 14–19) (PTAB May 18, 2022). Accordingly, collateral estoppel should not be applied when claim elements at issue were “not present in any of the claims for which unpatentability was determined in the prior *inter partes* review[s].” *Id.* at 18.

The situation in *Ohio Willow Wood* is distinguishable from the present matter. In that case, no new limitations were involved; instead, the Federal Circuit was addressing “the mere use of different words” to claim the **same** pertinent features. *Ohio Willow Wood Co.*, 735 F.3d at 1342–43. The Court described the differences as using “slightly different language to describe substantially the same invention.” *Id.* at 1342. Thus, the invalidity argument for the claim sets was determined to be the same issue. *Id.* at 1342–43.

The situation in *Soverain* is also distinguishable from the present matter, in which a different independent claim includes additional new elements. In *Soverain*, the Federal Circuit was addressing a dependent claim that added nothing more than specifying a network was an Internet. *Soverain Software LLC v. Victoria’s Secret Direct Brand Mgmt., LLC*, 778 F.3d 1311, 1319 (Fed. Cir. 2015).

The court found the minor additional feature did not change the invalidity analysis based on the patent owner's expert's admission the feature was "a routine incorporation" of existing technology. *Id.* at 1319–20.

Finally, the pertinent question is not whether the additional limitation is non-obvious, but whether the additional limitation alters the analysis. *Bourns, Inc. v. United States*, 537 F.2d 486, 493 (Fed. Cir. 1976); *see also Ohio Willow Wood*, 735 F.2d at 1343 (applying collateral estoppel based on the patent owner's failure to show how the language choice "changes the invalidity analysis"); *Rimfrost*, Paper 25 at 16 (agreeing with the patent owner's argument that the presence of the completely new claim elements "materially alters the question of invalidity").

In the instant proceeding, it is clear that the additional limitations were, and still are, relevant to the obviousness/invalidity analysis. Petitioner admits that the claims at issue in this proceeding include several material differences. Pet. 91–96. These different limitations were **never** at issue in the earlier *inter partes* review. With respect to the specific outer retractable units, the addition of these features to the claims prompted the Examiner to withdraw pending anticipation rejections and allow the '738 Patent. *See* Ex. 2005 (amending the claims to include the limitations at issue); Ex. 2006. The Examiner found these limitations to be material to the analysis and allowed the patent to issue. Likewise, the details of the

central lock's operation with respect to the folded and unfolded state have been raised for the first time in the instant Petition.

Further, as shown above, Petitioner's proposed combination fails to teach or suggest any of these limitations. *Supra* § III(B). For example, Petitioner has failed to show how the references could be combined to arrive at a collapsible canopy with the recited central lock and outer retractable units comprising a plurality of hinged X-shaped rod members.

Moreover, Patent Owner has shown that Petitioner's proposed combination would be **completely inoperable** for a collapsible canopy when these additional structural limitations are incorporated. *Supra* § III(D). Thus, these new limitations present in the '738 Patent and absent from the patent challenged in the prior proceedings materially alter the physical structure required by the claims and the corresponding questions of unpatentability. Collateral estoppel does not and cannot apply in this situation.

C. The Remaining Factors Cannot be Met

Where the issues are not the same, the other factors cannot be met—the pertinent issue was not actually litigated in the first action; resolution of the pertinent issue was not essential to a final judgment in the first action; and the

party never had a full and fair opportunity to litigate the pertinent issue in the first action.

D. Conclusion

For at least these reasons, collateral estoppel does not apply. The claims at issue include additional limitations that change the invalidity analysis. Further, application of collateral estoppel would operate to prevent Patent Owner from defending independent claims that have never been the subject of any review.

VI. THE PETITION SHOULD BE DENIED UNDER 35 U.S.C. § 325(d)

Institution of *inter partes* review is discretionary. *See* 35 U.S.C. § 314(a); *Harmonic Inc. v. Avid Tech, Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (confirming “the PTO is permitted, but never compelled, to institute an IPR proceeding”).

For at least the reasons discussed below, the Board should exercise its discretion to reject the Petition.

A. Discretionary Denial Standard

In determining whether *inter partes* review should be instituted, the Director is permitted to “take into account whether, and reject the petition or request

because, the same or substantially the same prior art or arguments previously were presented to the Office.” 35 U.S.C. § 325(d). The Board uses the following two-part framework in exercising its discretion:

- (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and
- (2) if either condition of [the] first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6, 8 (PTAB Feb. 13, 2020) (precedential).

A list of non-exclusive factors is used under the two-part framework, including:

- (a) the similarities and material differences between the asserted art and the prior art involved during examination;
- (b) the cumulative nature of the asserted art and the prior art evaluated during examination;
- (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;
- (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;
- (e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and
- (f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson & Co. v. B. Braun Melsungen AG, IPR2017-01586, Paper 8, 17–18 (PTAB Dec. 15, 2017). Factors a), b), and d) are used to evaluate whether the same or substantially the same art/arguments previously were presented and then factors c), e), and f) are used to determine whether a petitioner has demonstrated Office error. *Advanced Bionics*, Paper 6 at 10.

B. The Same or Substantially the Same Art Previously Was Presented to the Office

Turning to the pending Petition, the record shows that the same/substantially the same references used in Petitioner’s proposed grounds of rejection were previously presented to the Office.

1. Rousselle Was Presented to the Office and Considered by the Examiner

Under factor a), the Board considers the similarity of the art asserted in the Petition and the prior art involved in the original examination proceedings. In the instant proceedings, Rousselle was considered by the Examiner and the asserted art and prior art are therefore identical with respect to the primary reference.

The Petition relies heavily on the Rousselle reference (Ex. 1003) as is evident from the discussion in Patent Owner’s previous sections. In fact, both of the proffered grounds of rejection use Rousselle as the primary reference. Pet. 8.

Further, while the Summary of the Petition asserts “collapsible canopies and central locks” were well-known prior to Patent Owner’s invention, the other references discussed in this Summary section are Chang (Ex. 1004) and Ohnishi (Ex. 1006). Pet. 1–4. Despite Petitioner’s introduction of Chang’s canopy in this Summary section, Petitioner does not, and presumably could not, formulate a proposed ground of rejection based on Chang, either alone or in combination with any other references. *See* Pet. 8. Further, Petitioner admits that Ohnishi is directed to a lock for a “cart or carriage” and not to a canopy. Pet. 3. Ohnishi is only incorporated as a third reference to remedy deficiencies in Petitioner’s proposed combination of Rousselle and Tsai. Pet. 8. Thus, the Rousselle reference forms the sole foundation of Petitioner’s proposed grounds of rejection.

However, Rousselle was previously presented to the Office, was considered by the Examiner during prosecution of the ’738 Patent, and is included in the list of References Cited printed on the issued patent.

During examination of the ’738 Patent, the Office mailed a Non-Final Rejection (dated September 26, 2019), along with a Notice of References Cited, Search Notes, and EAST Search History.³ Ex. 2001. The Notice of References

³ This mailing is presented together as Patent Owner’s Exhibit 2001.

Cited is found at Page 10 of the Exhibit and clearly lists U.S. Pat. No. 6,345,639 to Gisele B. Rousselle (i.e., Rousselle, Ex. 1003). Ex. 2001, 10. The Examiner reviewed this reference and did not find it sufficient to warrant a rejection under either § 102 or § 103. Instead, the Examiner applied other art found in the same search. Ex. 2001, 6–8. Patent Owner then amended the claims on February 10, 2020, and the application was allowed on February 27, 2020.

The '738 Patent issued on June 2, 2020 and the printed patent clearly displays the Rousselle reference in the list of References Cited. Ex. 1001, 1–2.

Accordingly, with respect to the primary reference to Rousselle, there is no question the same art was presented previously to the Office and factor a) weighs in favor of discretionary denial.

2. Tsai Is Cumulative of References Raised By the Examiner

Under factor b), the Board considers the cumulative nature of the art asserted in the Petition and the prior art involved in the original examination proceedings.

A reference is cumulative when it “teaches no more than what a reasonable examiner would consider to be taught by the prior art already before the PTO.”

See Regeneron Pharms., Inc. v. Merus N.V., 864 F.3d 1343, 1350 (Fed. Cir. 2017) (quoting *Regents of the Univ. of Calif. v. Eli Lilly & Co.*, 119 F.3d 1559, 1575 (Fed. Cir. 1997)).

In the instant proceedings, Tsai is highly similar to, and at best cumulative of, references raised by the Examiner during prosecution of the '738 Patent.

In the proposed ground of rejection against independent claim 1 (Ground 1), Petitioner relies exclusively on Tsai as allegedly remedying the deficiencies of Rousselle with respect to Limitation B (“a plurality of outer retractable units, each outer retractable unit connected between two adjacent supporting legs, each said outer retractable unit comprises a plurality of hinged X-shaped rod members, each X-shaped rod member comprises a first eave pipe and second eave pipe hinged to one another”). Pet. 14–22. (All of the remaining limitations of independent claim 1 are alleged to be taught by Rousselle and combination with Tsai is referenced as a supplemental option. *Id.*)

However, Tsai is cumulative of references applied by the Examiner during prosecution of the '738 Patent. For example, in an Office Action dated September 28, 2018,⁴ the Examiner cited U.S. Pat. Pub. No. 2015/0308147 to Lee and U.S. Pat. No. 6,929,017 to Byun.⁵ Ex. 2002; Ex. 2003; Ex. 2004. The Examiner asserted that Lee taught “[o]uter retractable members comprised of X-members,”

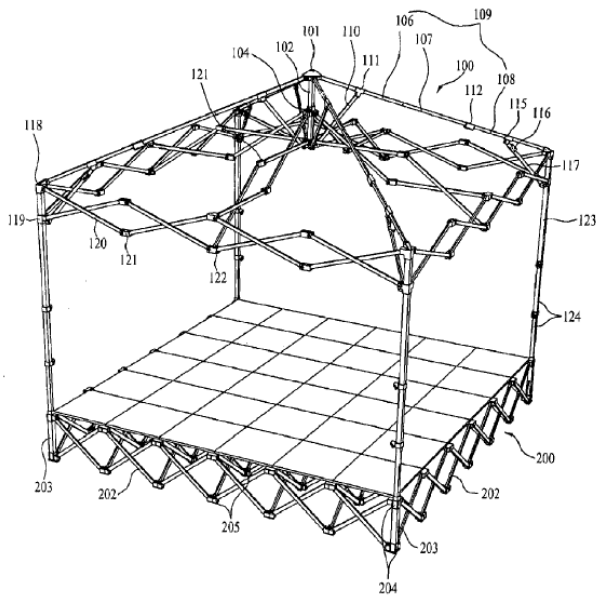
⁴ The September 28, 2018 Office Action is Patent Owner’s Exhibit 2002.

⁵ The Lee reference is Exhibit 2003; The Byun reference is Exhibit 2004.

Ex. 2002, 6, and that Byun taught “X shaped retractable units,” *id.* at 6–7.

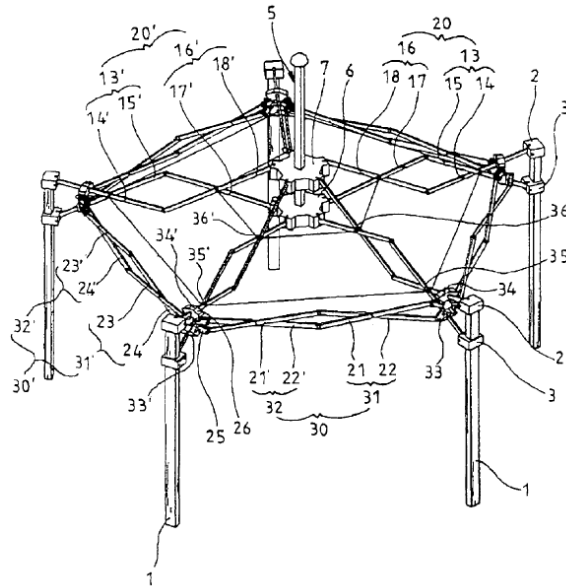
Exemplary Figures from Lee and Byun are shown below.

Fig. 1



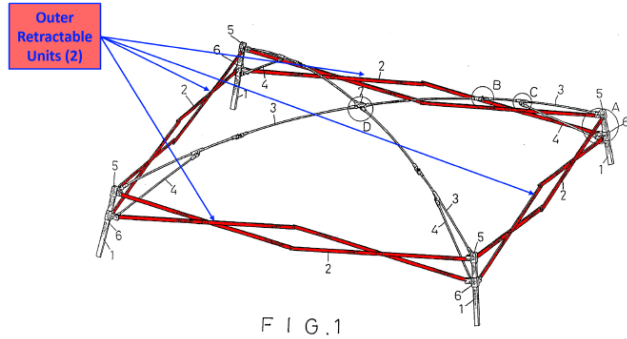
Lee, Figure 1

FIG. 1A

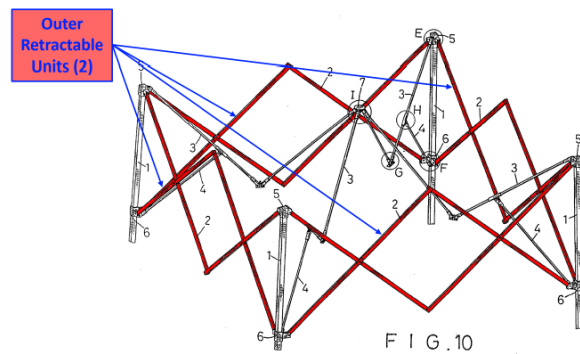


Byun, Figure 1A

Petitioner has now cited Tsai’s Figures 1 and 10 as allegedly showing the same features. Pet. 17. The annotated figures from the Petition are reproduced below:



Petitioner's Annotated Tsai Figure 1



Petitioner's Annotated Tsai Figure 10

Based on these facts, the Office previously was presented with multiple references cited for exactly the limitation for which Petition now offers Tsai, namely, limitation B (“a plurality of outer retractable units, each outer retractable unit connected between two adjacent supporting legs, each said outer retractable unit comprises a plurality of hinged X-shaped rod members, each X-shaped rod member comprises a first eave pipe and second eave pipe hinged to one another”).

Accordingly, the Tsai reference is merely cumulative of the references already considered by the Examiner and over which the '738 Patent was allowed. Thus, factor b) also weighs in favor of discretionary denial.

C. Petitioner Has Not Demonstrated Any Office Error

In situations such as the instant case where the same or substantially the same art was previously presented to the Office, Petitioner is required to demonstrate that the Office erred. *Advanced Bionics*, Paper 6 at 10. Otherwise,

when the first part of the two-part framework is met but a petitioner fails to demonstrate Office error, “the Director generally will exercise discretion not to institute *inter partes* review.” *Id.*

As discussed above, factors c), e), and f), may be relevant toward this second part of the framework. Factor c) concerns the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection. Factor e) looks at whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art. Factor f) reviews the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Applying the factors to this case, the primary reference was cited by the Examiner and included in the References Cited on the printed patent while the secondary reference is merely cumulative of references that were applied for the same limitations. Thus, the references were fully evaluated during examination and factor c) weighs against any error and in favor of discretionary denial.

With respect to factor e), the Petitioner has not demonstrated any error by the Office. In fact, the Petitioner’s only assertion of error was the following conclusory argument: “[t]o the extent PO argues Tsai is cumulative of another reference before the Examiner, then the Examiner erred in not applying that

reference against the claims.” Pet. 102. This conclusory argument is factually incorrect. As discussed above, the Examiner did apply the references for which Tsai is merely cumulative; for example, the Examiner used those references to reject the claims in the September 28, 2018 Office Action. Ex. 2002. Petitioner cannot point to any error by the Office and has failed to even present a proper allegation of such error. Accordingly, factor e) weighs in favor discretionary denial.

Finally, the Petitioner has not cited any additional evidence or facts that would demonstrate a clear mistake or reasonable basis to revisit the Examiner’s findings and factor f) weighs against institution.

D. Conclusion

In summary, the same or substantially the same art previously was presented to the Office and Petitioner has failed to demonstrate (or even allege) Office error with respect to the patentability of the challenged claims. The Board should exercise its discretion and deny institution under § 325(d).

VII. THE PETITION SHOULD BE DENIED UNDER § 314 (*Fintiv* Factors)

In addition to, and related to, the § 325(d) issues discussed above, Patent Owner contends the *Fintiv* factors also weigh in favor of denial. With respect to factors 1–5, Petitioner has noted the possibility of a stay in the co-pending litigation. Pet. 98. That stay has been granted.

However, the *Fintiv* factors are not limited to review of the facts of the co-pending litigation. Factor 6 addresses “other circumstances” including the relative strength or weakness of the Petitioner’s arguments. *Apple v. Fintiv*, IPR2020-00019, Paper 11, 14–16 (PTAB Mar. 20, 2020). Furthermore, the Board is authorized to include “other considerations” in the analysis, including any application of § 325(d), in order to best serve the “efficiency and integrity” of the patent system and the Office. *Id.* at 16.

As discussed above, the Petition is defective on its face with respect to certain limitations and relies on an inoperable combination. *Supra* § III. Accordingly, Petitioner has not presented a valid case for institution. Further, the references relied on by the Petitioner were presented previously and/or are merely cumulative of references presented to the examiner. *Supra* § VI. Accordingly, there is a strong case for discretionary denial under § 325(d).

Based on these facts, the other circumstances and considerations of the instant case weigh heavily in favor of denial.

VIII. CONCLUSION

For at least the foregoing reasons, Petitioner has failed to show a likelihood of success on any of its proposed grounds of rejection and discretionary denial is appropriate. Therefore, Patent Owner respectfully requests that the Board deny institution of *inter partes* review on both grounds.

Respectfully submitted,

Date: May 16, 2023

/Anthony L. Meola/
Anthony L. Meola
Reg. No. 44,936
SCHMEISER, OLSEN & WATTS LLP
3 Manhattanville Road, Suite 105
Purchase, New York
Tel: (914)-825-1039
ameola@iplawusa.com

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24, the undersigned certifies that the Patent Owner's Preliminary Response, exclusive of parts exempted, contains 7,522 words and complies with the type-volume limitations of 37 C.F.R. § 42.24.

Date: May 16, 2023

/Anthony L. Meola/
Anthony L. Meola
Reg. No. 44,936
SCHMEISER, OLSEN & WATTS LLP
3 Manhattanville Road, Suite 105
Purchase, New York
Tel: (914)-825-1039
ameola@iplawusa.com

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the Patent Owner's Preliminary Response is being served on May 16, 2023, via email directed to counsel of record for the Petitioner at the following:

BoxGlobalShade@knobbe.com

with copies to:

Marko R. Zoretic, Lead Counsel – 2MRZ@knobbe.com

Nathan D. Reeves, Backup Counsel – 2NDR@knobbe.com

Date: May 16, 2023

/Anthony L. Meola/
Anthony L. Meola
Reg. No. 44,936
SCHMEISER, OLSEN & WATTS LLP
3 Manhattanville Road, Suite 105
Purchase, New York
Tel: (914)-825-1039
ameola@iplawusa.com