

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 REPLY TO PETITIONER'S OPPOSITION TO
PATENT OWNER'S CONTINGENT *REVISED* MOTION TO AMEND

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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
2007	Declaration of Wendy Reffeor, Ph.D. (with attached CV)
2008	U.S. Patent No. 5,230,358 (“Forell”)
2009	U.S. Patent No. 4,945,936 (“Surrendi”)
2010	U.S. Patent No. 4,202,363 (“Watts”)
2011	U.S. Patent No. 3,929,146 (“Maiken”)
2012	U.S. Patent No. 2,771,087 (“Simonson”)
2013	Originally-Filed Specification (U.S. Patent App. No. 15/925,314)
2014	Originally-Filed Drawings (U.S. Patent App. No. 15/925,314)
2015	Originally-Filed Specification (Parent Application - U.S. Patent App. No. 15/549,164)

2016	PCT Pub. No. WO2017/028659 (PCT/CN2016/091675)
2017	Espacenet Patent Translate Translation of PCT Pub. No. WO2017/028659 (PCT/CN2016/091675)
2018	Japanese Pat. Pub. No. JP3200660U (JP Patent App. No. 2015-004155U)
2019	Espacenet Patent Translate Translation of Japanese Pat. Pub. No. JP3200660U (JP Patent App. No. 2015-004155U)
2020	Declaration of Jared L. DuJack
2021	Second Declaration of Wendy Reffeor, Ph.D.

I. INTRODUCTION

Patent Owner's revised substitute claims are patentable over the original grounds presented in the Petition. Petitioner now proposes further incorporation of two additional references, thus relying on five (5) references to allegedly render obvious the revised substitute claims. Petitioner uses an umbrella tent (Rousselle), another canopy (Tsai),¹ a baby carriage (Ohnishi), a jewelry clasp (Hoover), and yet another canopy (Seo). However, Petitioner fails to put forward a clear ground of unpatentability, relies on a non-analogous reference, and cherry-picks structural details/locations in ways that could only be supported by hindsight bias.

II. PETITIONER HAS NOT MET ITS BURDEN

Petitioner has failed to meet its burden to show unpatentability by a preponderance of the evidence. In fact, as discussed in more detail below with respect to the individual claims, Petitioner has not proffered or even identified a complete combination of references that is alleged to teach or suggest the limitations of the revised substitute claims. Further, as discussed below, Petitioner relies on incorporation of a non-analogous reference and combinations that would not be made by one of skill in the art.

¹ Petitioner's Opposition does not specify whether the primary modification or alternative modification is used as the basis for further combination.

III. SUBSTITUTE CLAIM 15 IS PATENTABLE

A. PETITIONER HAS NOT PRESENTED A FULL REJECTION

Petitioner has not proffered or even identified a complete combination or modified device. For example, Petitioner does not identify whether the primary modification or alternative modification is being used, or how either modification would be further modified to arrive at the substitute claim. Petitioner's arguments against the revised substitute independent claim 15 do not discuss Rousselle in view of Tsai or Tsai in view of Rousselle. Instead, Petitioner merely proposes modifying Rousselle with Ohnishi as well as with the additional references to Hooper and Seo, without any discussion of Tsai at all. See Opp. 2–13. Petitioner appears to take a scavenger hunt approach to the claim limitations without even attempting to incorporate these into the modifications of Rousselle in view of Tsai or vice versa. In fact, the only discussion of Tsai comes when discussing the final limitation related to the unfolded state. Opp. 13–15. Even here, Petitioner merely contradicts Patent Owner's assertion of inoperability but does not offer any explanation of the full combination of the five references.

Accordingly, Petitioner has failed to meet its burden to show unpatentability.

B. HOOPER IS NOT ANALOGOUS ART

Petitioner has also failed to meet its burden because it relies on non-analogous art. The Hooper reference is not analogous, and proposed combinations

using this reference are improper. The MPEP and Federal Circuit are clear that “[i]n order for a reference to be proper for use in an obviousness rejection under 35 U.S.C. § 103, the reference must be analogous art to the claimed invention.” MPEP § 2141.01(a) (citing *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004)). A reference is analogous to the claimed invention if:

- (1) the reference is from the same field of endeavor as the claimed invention (even if it addresses a different problem); or
- (2) the reference is reasonably pertinent to the problem faced by the inventor (even if it is not in the same field of endeavor as the claimed invention).

Id. Hooper fails both of these tests. Petitioner is moving the goalposts on both the field of endeavor and the problem faced by the inventor in an attempt to cherry-pick structural features from Hooper.

Hooper is directed to the field of jewelry clasps and is therefore not from the same field. Ex. 2021, ¶¶ 24, 26–28. Petitioner originally identified the field of endeavor as “collapsible tents or canopies,” Pet. 8, or as “locking mechanisms for collapsible structures,” *id.* at 9. Because Hooper is not directed to either of these fields, Petitioner’s Expert now recharacterizes the field as merely “locking mechanisms.” Ex. 1202, ¶ 12. This is contrary to Petitioner’s Expert’s original declaration in which the field of endeavor was identified as “collapsible tents or canopies.” Ex. 1002, ¶ 58. Petitioner now proposes removing nearly all of the

structural components from the field of endeavor, namely, the tent or canopy and collapsible structure, to broaden the scope of the art and find limitations not taught by analogous references.

Likewise, Hooper is not reasonably pertinent to the problem faced by the inventor. Ex. 2021, ¶¶ 25–28. The '738 Patent identifies the problem, stating: “What is needed is **collapsible canopy frame** with a better locking mechanism.” Ex. 1001, 1:46–47 (emphasis added); *see also*, Ex. 2015, 2:4–6 (stating, in the parent specification, “one technical problem to be solved by the present invention is to provide a central lock **enabling to support an entire canopy and enabling the canopy to be uniformly stressed.**”) (emphasis added). Petitioner originally identified the problem as “constructing sturdy, resilient, easy-to-use collapsible canopies,” Pet. 8, or as “the need for easy-to-use, reliable locking mechanisms for collapsible structures,” *id.* at 9. Because Hooper is not pertinent to any of the problem statements laid out above, **whether from the '738 Patent or from Petitioner's own Expert**, Petitioner now attempts to move the goalposts on the problem statement, recharacterizing the problem as “the need for easy-to-use, reliable locking mechanisms.” Ex. 1202, ¶ 12. Again, this is contrary to Petitioner's Expert's original declaration in which the problem was identified as “the need for sturdy, resilient, easy-to-use collapsible tents or canopies.” Ex. 1002, ¶ 58. Further, as with the recharacterized field, this newly-proposed

recharacterized problem removes nearly all of the structural components, namely, the tent or canopy and collapsible structure, to try to find features missing from analogous references.

When starting from the proper field of endeavor and/or problem faced by the inventor, Hooper's jewelry clasp is not analogous art that can be used in an obviousness rejection of the substitute claims. Ex. 2021, ¶¶ 24–28. Clasps used for jewelry are not analogous to locking mechanisms for collapsible structures as jewelry is neither collapsible nor a support structure. *Id.* at 27. Jewelry, such as the piece taught by Hooper, does not support a grounded load (support structure) nor does it fold/unfold between a collapsed state and a deployed state (collapsible). *Id.* Thus, Hooper is not analogous and would not be used by one having skill in the art. *Id.* at 24–28. The proposed combination based on Hooper is improper.

**C. HOOBER WOULD NOT BE COMBINED WITH THE MODIFIED
STRUCTURE OF ROUSSELLE, TSAI, AND OHNISHI**

Petitioner proposes addition of Hooper's alleged bottom cap seat and bottom cap cover to further change the modified structure of the Rousselle/Tsai/Ohnishi device. Opp. 3–8. As discussed above, Hooper is a jewelry clasp and is not analogous art that would be used. Even assuming Hooper is analogous, given that Hooper is directed to a jewelry clasp and not a collapsible canopy structure, one of skill in the art would not have any reason to expect this structure would be

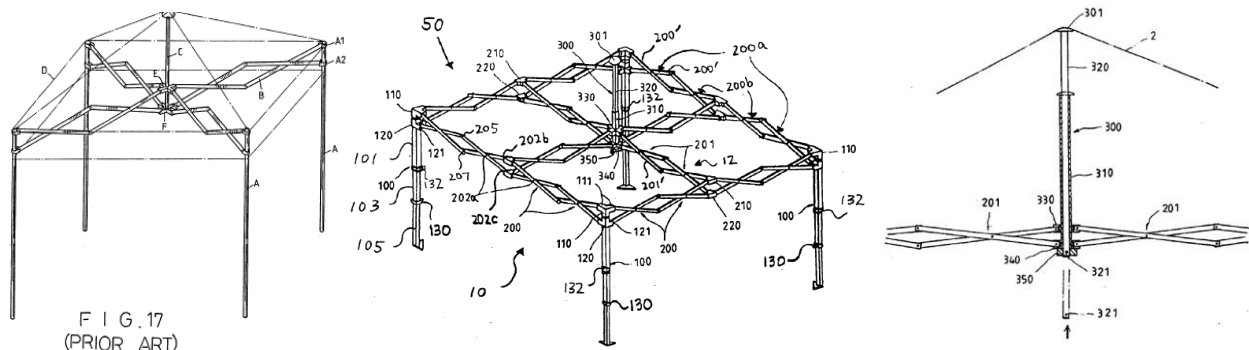
beneficial for a canopy. Ex. 2021, ¶¶ 30–32. Further, Hooper’s structure would not be incorporated into the proposed modified structure of Rousselle/Tsai and Ohnishi. For example, both Rousselle and Ohnishi use an **internal** spring. Ex. 1003, Fig. 2(A); Ex. 1006, Fig. 9. Hooper uses an **external** flat spring 28 as part of the “positive locking action which is an essential feature of [Hooper’s] invention”. Ex. 1203, 3:46–50; *see also id.* at Figs. 1–3. Petitioner ignores the fact that Hooper thus uses an entirely different positive locking action and the incorporation would require a reworking of the Rousselle/Tsai/Ohnishi device to include the external spring feature and/or a reworking of Hooper to incorporate the Rousselle/Tsai/Ohnishi device. Ex. 2021, ¶ 33. For example, Ohnishi’s lock could not be incorporated into Rousselle without significant redesign due to the location of Ohnishi’s lock member 65 with respect to the fixed shaft 63. In Ohnishi, the biasing member 68 is compressed away from the fixed shaft 63, whereas the spring SP of Rousselle is compressed towards the center pin 710. Hooper then teaches yet another different locking concept and would not be incorporated.

Thus, even if Hooper were analogous art that could be applied, one of skill in the art would not use it to arrive at the structure details of the revised substitute claims. Instead, Petitioner’s proposed combination is based on the use of hindsight bias and cherry-picked features to recreate the substitute claims without considering how the features would interact.

D. SEO IS EXACTLY THE TYPE OF ART TSAI DISPARAGES

Turning to Seo more specifically, Petitioner proposes incorporating structure from Seo into the heavily modified device created by Rousselle, Tsai, Ohnishi, and Hooper. Specifically, Petitioner points to Seo's Figure 5 and the connecting members 250, 252, 254, and 256. Opp. 8–13.

As Patent Owner has discussed with respect to the issued claims, Tsai expressly disparages prior art references that use a center strut. Patent Owner Response 30–32, 36, 42, 47; Ex. 2021, ¶¶ 35–36. Seo is exactly such a reference. Ex. 2021, ¶ 37. Depicted below are Tsai's Figure 17 (left) alongside Seo's Figures 1 (middle) and 6 (right):



Ex. 1005, FIG. 17; Ex. 1204, FIGS. 1, 6. As can be clearly seen, both the disparaged prior art reference and Seo use a center strut that extends upward from the inner units. Ex. 2021, ¶ 38. Tsai disparages these structures for several reasons. First, Tsai notes that a center strut results in difficulty setting up the tent because “an extra person is sometimes needed to push the center strut C upwardly

to its completely extended position.” Ex. 1005, at 2:19–22. Further, the center strut reduces the headroom within the tent. *Id.* at 2:17–19. Seo suffers from these same defects. Ex. 2021, ¶ 35. Thus, one having skill in the art using Tsai (either as in the primary modification or as a starting point as in the alternative modification) would be expressly taught not to use the structure of Seo. Ex. 2021, ¶ 39.

**E. SEO TEACHES AWAY FROM CENTER ACTIVATION AND
USES INDEPENDENT LEG ACTIVATION AND LEG LOCKS**

Further, Seo expressly teaches away from center driven unfolding and would not be used to arrive at the claimed embodiments. Seo is clear that pushing the center pole is independent from, and not connected to, the unfolding. Ex. 1204, ¶¶ [0046]–[0048]; Ex. 2021, ¶¶ 40–41. Seo teaches that the inner pole 320 is pushed up to engage the lock and then unfolding is accomplished by pulling the legs (side poles 100) apart. Ex. 1204, ¶ [0048]; Ex. 2021, ¶ 40. In fact, Seo expressly teaches that the scissor assemblies 200/201 and the side poles 100 can be collapsed even while the locking pin 352 is still engaged. Ex. 1204, ¶ [0051]; Ex. 2021, ¶ 41. Further, as is clear from Figure 6 of the reference shown above, the inner pole of Seo does not have any structure/feature that would be amenable to pushing by the user. Accordingly, one of skill in the art would not incorporate Seo into a center activated device. Ex. 2021, ¶¶ 40–42. Further, Seo’s teachings reinforce Tsai’s teaching away from center activation. *Id.* at ¶ 42.

Still further, like Tsai, Seo relies on leg locks 127 to allow or prohibit the unfolding of the legs. Ex. 1204, ¶ [0030]. Thus, the reference teaches activation at the legs instead of centrally. Seo was filed after Rousselle (and Tsai) were publicly available but chose not to use or incorporate a central lock or central activation. The reference would also require at least a second person—at least one person at the legs and an additional person to push the center strut.

In summary, Petitioner is relying on an umbrella tent modified by two tent references that teach away from center activation, together with a baby carriage and a jewelry clasp, to try to recreate a canopy that uses center activation.

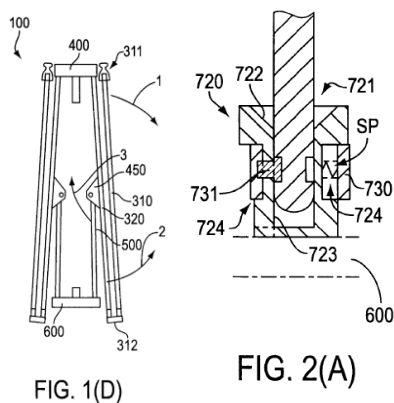
F. SEO TEACHES A SINGLE PIECE AND DOES NOT LOCATE THE CONNECTION PIECE ON THE BOTTOM CAP SEAT

Further, even if one of skill in the art were to attempt to incorporate Seo into the heavily modified device of Rousselle, Tsai, Ohnishi, and Hooper, the resulting structure would be a single piece and would not locate the connection piece on the bottom cap seat. Ex. 2021, ¶ 43.

Seo locates the alleged connecting members 250, 252, 254, 256 on a lower central hub 340. Ex. 1204, ¶ [0037]; Ex. 2021, ¶ 44. In fact, Seo teaches that these elements are located on a fixing bracket 350 that is “a single integrated piece with the lower central hub 340.” *Id.* at ¶ [0042]; Ex. 2021, ¶ 44. Thus, Seo expressly teaches a single component design. Ex. 2021, ¶ 44. This is consistent with

Rousselle, but contradictory to Hooper and teaches away from the proposed modification using Hooper.

Further, Rousselle specifically locates the connection with the alleged connecting rods on what would correspond to the bottom cap cover, namely, lower clevis 600, as is evident from Figs. 1(D) and 2A reproduced below:



Ex. 1003, Figs. 1(D), 2(A); Ex. 2021, ¶ 45. Thus, one of skill in the art would either replace Rousselle's bottom cap with Seo's lower central hub, retaining the single piece design, or would attach Seo's connecting members on Rousselle's bottom cap, again retaining the single piece design. Ex. 2021, ¶ 46. Neither combination results in the structure of the substitute claims.

Further, since Rousselle and Seo both use a lower portion of a central lock and have locking pieces there is no reason why one of skill in the art would be motivated to modify these using the jewelry clasp of Hooper (even if Hooper is assumed to be analogous). Ex. 2021, ¶ 47. Instead, the proposed modification is

supported only by impermissible hindsight bias, i.e., the Petitioner's post hoc recreation of Patent Owner's revised substitute claims based on a scavenger hunt for the structural features.

**G. HOOBER AND SEO WOULD NOT BE USED WITH UNFOLDING
DRIVEN BY A CENTRAL LOCK**

Substitute claim 15 also includes a recitation of how the collapsible canopy frame is moved from the unfolded state by pushing the center bottom cap. As Patent Owner has argued, Petitioner's proposed combinations do not teach or suggest these limitations and are inoperable for them. *See e.g.*, Motion 19–21. The additional references also fail to remedy these deficiencies. Hooper is a jewelry clasp, does not perform any folding/unfolding, and would not be capable of driving any retractable units during an unfolding process. Ex. 2021, ¶ 49. Likewise, as discussed above, Seo teaches activation at the legs and not any unfolding driven through the center. *Id.* at ¶ 50. Accordingly, one of skill in the art would not use these references to arrive at the structure of substitute claim 15 with the recited unfolding limitations. *Id.* at ¶ 51.

IV. SUBSTITUTE CLAIMS 16 AND 17 ARE PATENTABLE

Again, Petitioner has failed to show how substitute claim 15 is unpatentable and has failed to articulate any full combination of references or modified device that arrives at the structure of that claim. Further, as discussed above, Petitioner

has failed to show how the limitations of the connection piece of said bottom cap seat would be taught. Thus, with respect to substitute claim 16, Petitioner has also failed to show how the limitations of an inner end of said first connecting rod is disposed within a receiving groove formed by at least two connection pieces of said bottom cap seat would be taught and one of skill would not arrive at this more detailed structure. Ex. 2021, ¶¶ 52–54.

Likewise, with respect to substitute claim 17, Petitioner has failed to show how the limitations wherein the first connecting rod is hinged with said connection piece at a location above said clamp locking part of said center pole would be taught and one of skill would not arrive at this more detailed structure. *Id.* at ¶¶ 55–57. Again, the locking mechanism of Seo cited by Petitioner only holds the center poles and does not lock the rest of the canopy structure. Thus, Seo does not teach any relationship between the clamp locking part of a center lock for the canopy and the location of a connection piece of a bottom cap seat.

V. CONCLUSION

Patent Owner respectfully requests that, should claims 1, 2, or 4 of the '738 Patent be found to be unpatentable, the Board grant the Contingent *Revised* Motion to Amend with respect to the corresponding substitute claim(s).

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Respectfully submitted,

Date: May 10, 2024

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the Patent Owner's Reply to Petitioner's Opposition to Patent Owner's Contingent *Revised* Motion to Amend is being served on May 10, 2024, via email directed to counsel of record for the Petitioner at the following:

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