

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ZHEJIANG ZHENGTE CO. LTD.,
Petitioner,

v.

ATLEISURE, LLC,
Patent Owner.

IPR2021-00430
Patent 8,104,492 B2

Before LYNNE H. BROWN, ERIC C. JESCHKE, and
KARA L. SZPONDOWSKI, *Administrative Patent Judges*.

SZPONDOWSKI, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Zhejiang Zhengte Co. Ltd. (“Petitioner”) filed a Petition to institute an *inter partes* review of claims 1–7 of U.S. Patent No. 8,104,492 B2 (Ex. 1001, “the ’492 patent”). Paper 1 (“Petition” or “Pet.”). ATLeisure, LLC (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”).

Institution of an *inter partes* review is authorized by statute when “the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a) (2018).

Based on the current record, and, for the reasons explained below, we determine that Petitioner has not established a reasonable likelihood that it would prevail with respect to at least one challenged claim. Accordingly, we do not institute an *inter partes* review of the challenged claims of the ’492 patent.

II. BACKGROUND

A. *Real Parties in Interest*

Petitioner identifies Zhejiang Zhengte Co. Ltd. and Sorara Outdoor Living USA Inc. as the real parties in interest. Pet. 2. Patent Owner identifies itself as the sole real party in interest. Paper 4, 2.

B. *Related Matters*

Patent Owner identifies the following litigation as a related matter: *ATLeisure, LLC v. Sunvilla Corporation*, No. 1:20-cv-04662-TWT (N.D. Ga). Paper 4, 3.

C. The '492 Patent (Ex. 1001)

The '492 patent is titled “Adjustable Offset Umbrella.” Ex 1001, code (54). Figure 2, reproduced below, is a perspective view of the adjustable offset umbrella with the canopy raised.

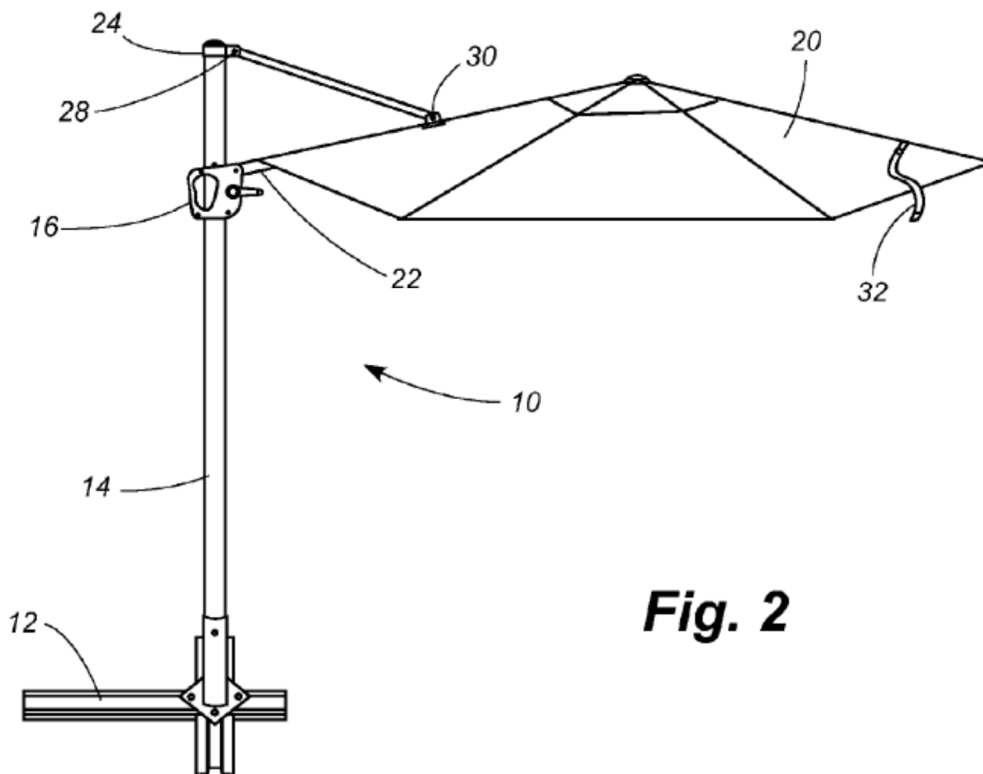


Fig. 2

Figure 2 depicts adjustable offset umbrella 10, with base 12 that supports a main pole 14 in a generally vertical position. *Id.* at 2:42–45. Sliding member 16 is movably mounted to main pole 14 to allow sliding movement between upper and lower positions along the pole. *Id.* at 2:45–48. In the embodiment disclosed in Figure 2, sliding member 16 takes the form of a collar that encircles main pole 14. *Id.* at 2:48–50. Canopy assembly 20 is supported alongside main pole 14 by main support arm 22.

Id. at 2:55–56. Main support arm 22 is pivotally mounted to sliding member 16 at one end and extends to the central portion of canopy assembly 20. *Id.* at 2:56–58.

Figure 3, reproduced below, is a schematic representation of the adjustable offset umbrella of Figure 2 with the canopy removed.

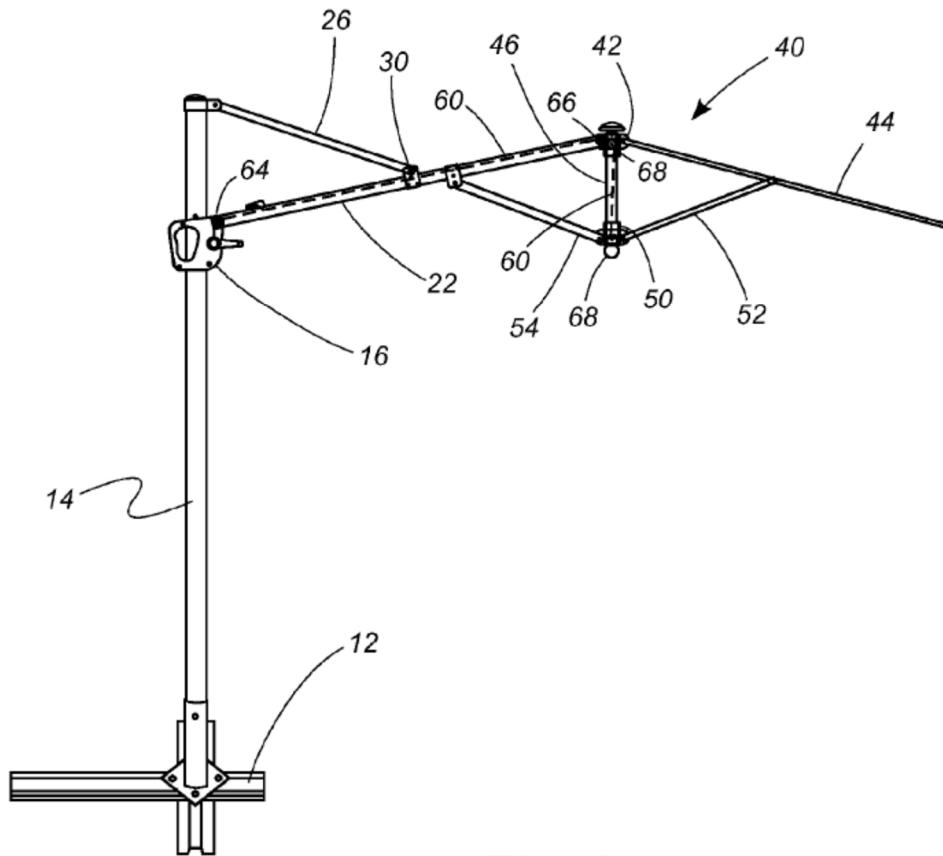


Fig. 3

Figure 3 depicts canopy support structure 40, where main support arm 22 serves as a support rib and is pivotally mounted to rib hub 42. *Id.* at 2:66–3:4. Brace 26 is pivotally mounted to the top of main pole 14 at one end and to main support arm 22 at the opposite end. *Id.* at 2:59–62. Line 60 extends inside main support arm 22 from the lower end of the support arm to its upper end. *Id.* at 3:16–18.

Figure 4, reproduced below, is a side cutaway view of a sliding member of the adjustable offset umbrella of Figure 2.

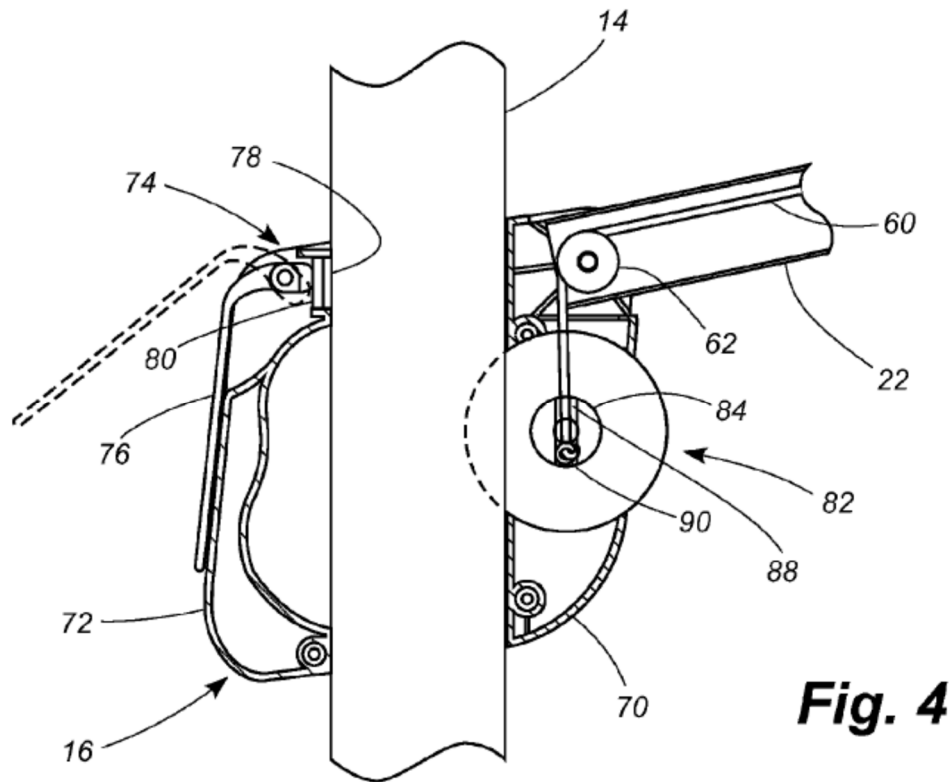


Figure 4 depicts sliding member 16 that includes cam lock member 74 pivotally mounted in an upper portion of housing 70, that can be used to secure sliding member 16 against the pole. *Id.* at 3:25–40. Winding mechanism 82 is also mounted to housing 70, and includes winder hub 84 around which line 60 can be wrapped. *Id.* at 3:41–44. Crank 92 is also provided by which a user can rotate winding mechanism 82 to tension or to relax line 60. *Id.* at 3:46–51.

Movement of sliding member 16 up and down main pole 14 adjusts the angle of the canopy. *Id.* at 3:52–54. Figure 6, reproduced below, is a

side perspective view of the adjustable offset umbrella of Figure 1 showing the canopy supported at various angles.

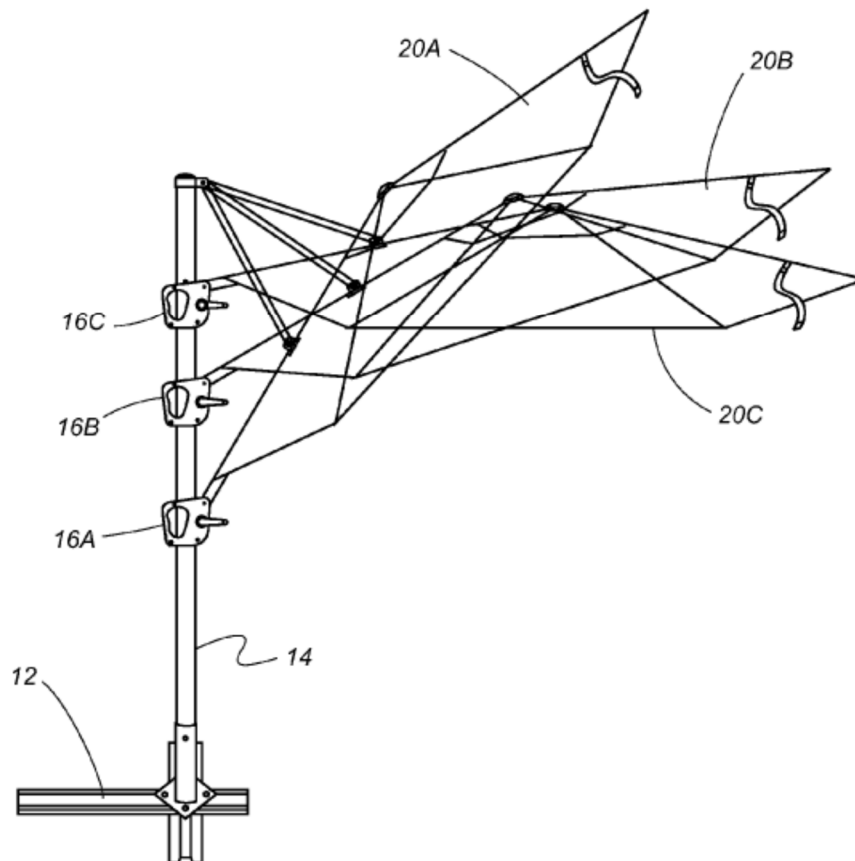


Fig. 6

Figure 6 depicts position of sliding member 16A corresponding to position of the canopy 20A, position of sliding member 16B corresponding to position of the canopy 20B, and position of sliding member 16C corresponding to position of the canopy 20C. *Id.* at 3:55–59.

D. Illustrative Claims

Petitioner challenges claims 1–7 of the '492 patent. Pet. 5. Claims 2–7 depend from claim 1. Ex. 1001, 5:11–6:17. Claim 1, reproduced below

with brackets noting Petitioner's identifiers, is illustrative of the subject matter of the challenged claims:

1. An umbrella comprising:

[1.1] a main pole having a lower end for support by a support surface and extending generally upward to an upper end;

[1.2] a sliding member associated with the main pole and selectably moveable thereon between lower and upper locations along the main pole;

[1.3] locking means for releasably securing the sliding member to the main pole at a selected location along the main pole;

[1.4] an umbrella canopy having a central region;

[1.5] an arm associated with the central region and extending radially therefrom to an outer end operatively associated with the sliding member;

[1.6] a brace having a first end pivotably attached to an upper portion of the pole above the sliding member and a second end pivotably attached to the arm;

[1.7] a winding mechanism having a winder hub around which a line can be wound, the winder hub being mounted to the sliding member and movable therewith:

[1.8] a line having a first end that winds around the winder hub, an intermediate portion extending from the winder hub along the arm to the umbrella canopy, and a second end that engages the umbrella canopy;

[1.9] wherein rotation of the winder hub tensions or relaxes the line depending upon the direction of rotation of the winder hub, and wherein operation of the winding mechanism to apply tension to the

line opens and closes the umbrella canopy in response to movement of the line; and

[1.10] wherein the angle of the umbrella canopy with respect to the main pole can be controlled by moving the sliding member along the main pole.

Id. at 4:47–5:10.

E. Evidence

Petitioner relies on the following references. *See* Pet. 6–7. Petitioner also relies on the Declaration of Patrick Johannes Maria van Lierop, Petitioner’s R&D Director (Ex. 1011) (“van Lierop Declaration”).

Reference	Exhibit	Patent/Printed Publication
Harbaugh	1004	U.S. Patent Application Publication No. 2004/0177871 A1 to Harbaugh, published September 16, 2004
Liu ’068	1005	U.S. Patent No. 7,341,068 B2 to Liu, issued March 11, 2008
Liu ’171	1006	U.S. Patent No. 5,284,171 to Liu, issued February 8, 1994
Liu ’453	1007	U.S. Patent No. D609,453 S to Liu, issued February 9, 2010
Tung	1008	U.S. Patent No. 6,478,037 B2 to Tung, issued November 12, 2002
Bertola	1009	German Patent No. DE20014895U1 to Bertola, published November 16, 2000
Wang	1010	Chinese Patent No. ZL200720106096.5/CN201001460Y to Wang, published January 9, 2008
Huali	1012	U.S. Patent Application Publication No. US2008/0236640 A1 to Huali, published October 2, 2008

F. Asserted Grounds

Petitioner asserts that claims 1–7 are unpatentable based on the following grounds (Pet. 5):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 5–7	102 ¹	Liu '453
2–4	103	Liu '453, Tung, Liu '171, Liu '068, Wang, Bertola, and Harbaugh
1–7	103	Liu '068, Liu '453, Liu '171, Wang, Bertola, and Tung

III. ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner contends a person of ordinary skill in the art at the time of the invention “would have had at least an undergraduate degree or equivalent academic or professional training in mechanical engineering, or a related field, and at least two years of relevant industry experience.” Pet. 9–10 (citing Ex. 1011 ¶¶ 11–12). Patent Owner states that “applying this level of skill is sufficient for the Board to evaluate the Petition Grounds.” Prelim. Resp. 23.

We find that Petitioner’s proposal is consistent with the level of ordinary skill in the art reflected by the prior art of record, and, therefore, adopt Petitioner’s proposed level of ordinary skill in the art for purposes of

¹ The Leahy-Smith America Invents Act (“AIA”) includes amendments to 35 U.S.C. §§ 102, 103 that became effective on Mar. 16, 2013. Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011). Because the application from which the '492 patent issued was filed before this date, the pre-AIA versions of §§ 102 and 103 apply.

this Decision. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

B. Claim Construction

Petitioner contends that the plain and ordinary meaning should apply and “is not currently aware of any claim term that requires a special construction.” Pet. 10. Patent Owner “submits that the claim terms of the ‘492 patent are to be given their ordinary and customary meaning, and no further construction is needed.” Prelim. Resp. 22. At this stage in the proceeding, only terms that are in controversy need to be construed, and then only to the extent necessary to determine whether to institute *inter partes* review. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))). After reviewing the parties’ arguments and evidence, we determine that we do not need to expressly construe any term for purposes of this Decision.

C. Anticipation Based on Liu ’453 and Obviousness Based on Liu ’453, Tung, Liu ’171, Liu ’068, Wang, Bertola, and Harbaugh

Petitioner contends claims 1 and 5–7 are anticipated by Liu ’453. Pet. 5, 13–20, 23–25. Petitioner also contends that claims 2–4 are obvious over Liu ’453 combined with Tung, Liu ’171, Liu ’068, Wang, Bertola, and Harbough. Pet. 5, 21–23. For the reasons that follow, we are not persuaded that Petitioner has established a reasonable likelihood of prevailing on its assertion that claims 1 and 5–7 are anticipated by Liu ’453 and that claims 2–4 are obvious over Liu ’453, Tung, Liu ’171, Liu ’068, Wang, Bertola, and Harbaugh.

1. *Liu '453 (Ex. 1007)*

Liu '453 is titled “Patio Umbrella” and is a design patent claiming the ornamental design for a patio umbrella. Ex. 1007, codes (54), (57).

Figure 3, reproduced below, is a side view of a patio umbrella.

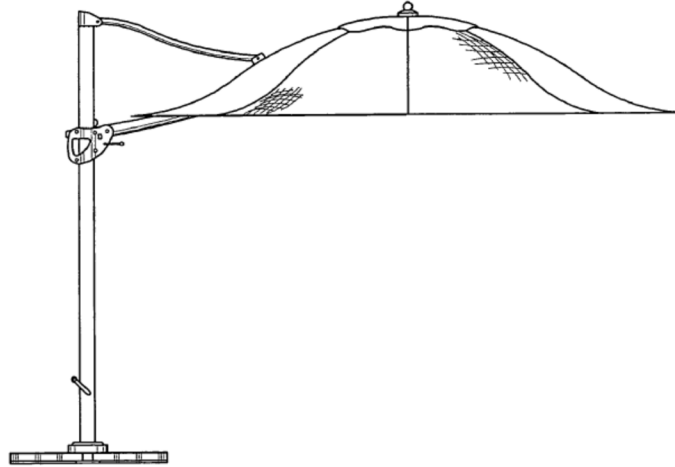


FIG.3

Figure 3 depicts a patio umbrella from the side view.

Figure 6, reproduced below, shows a patio umbrella from another perspective.

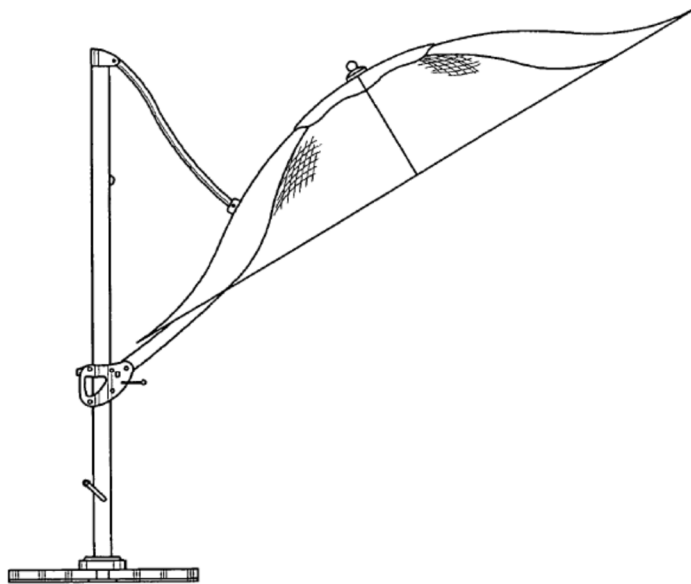


FIG.6

Figure 6 depicts a side view of a patio umbrella with the canopy tilted.

2. *Analysis of Independent Claim 1*

Petitioner provides side-by-side comparisons of the claimed umbrella and the umbrella depicted in Liu '453. Pet. 14. In addition, Petitioner provides a claim chart identifying where it asserts Liu '453 discloses the limitations in claims 1 and 5–7. *Id.* at 14–20, 23, 25.

a) Petitioner's Contentions

Limitation [1.3] recites a “locking means for releasably securing the sliding member to the main pole at a selected location along the main pole.” Ex. 1001, 4:53–55. Petitioner asserts that Liu '453's

sliding member includes a handle and a button, which a POSITA would readily recognize as being a typical button-actuated locking mechanism for locking and unlocking the

umbrella sliding member. See, e.g., Ex. 1011, Para. 29 (Chart). Such a locking mechanism is required for device to function because the sliding member – which controls the tilt of the umbrella – must be able to be fixed at a selected location / tilt.
Id.

Pet. 16. Petitioner further contends that “[s]uch locking means are well known and are also disclosed, for example, in the Bertola Patent and the Wang Patent.” *Id.* at 16–17 (citing Ex. 1009, Fig. 1; Ex. 1010, Abstr.).

Limitation [1.7] recites “a winding mechanism having a winder hub around which a line can be wound, the winder hub being mounted to the sliding member and movable therewith.” Ex. 1001, 4:63–65. Petitioner asserts that Liu ’453’s umbrella “includes a winding mechanism that is mounted to the sliding member and moveable therewith.” Pet. 18.

Petitioner contends:

The winding mechanism of the ‘453 Patent is immediately recognizable as a typical crank/line mechanism frequently used with such umbrellas for opening and closing the canopy and which are also shown – for example – in the Liu ‘068 Patent and the Harbaugh publication. Ex. 1005, Col. 1. 66 – Col. 2, l. 2 (“One end of the line is wound on the winder, and the other end passes through tubes of the mast and arm to connect with a knob immediately below the lower hub of the canopy.”); Ex. 1004, [0028] (“A tension line 60 is wound on the winder hub inside the mast 20 and extends upwardly within the mast to a stationary pulley mounted adjacent the upper end of the mast.”).

Id.

Limitation [1.8] recites “a line having a first end that winds around the winder hub, an intermediate portion extending from the winder hub along the arm to the umbrella canopy, and a second end that engages the umbrella canopy.” Ex. 1001, 4:66–5:2. Petitioner asserts that Liu ’453 “includes a

crank connected to a winding mechanism, which a [person of ordinary skill in the art] would readily recognize as being a necessary component for opening and closing the umbrella canopy.” Pet. 19. Petitioner further asserts that

The disclosed winding mechanism of the ‘453 Patent necessarily also includes a line/cable that extends from the winding mechanism and engages the umbrella canopy. *Id.* Such a mechanism is indeed required for the ‘453 Patent design, which is disclosed as being collapsible. *See, e.g.*, Fig. 8. As noted above, such mechanisms are well known in the art and are also shown – for example – in the Liu ‘068 Patent and the Harbaugh publication. Ex. 1005, Col. 1. 66 – Col. 2, l. 2; Ex. 1004, [0028].

Pet. 19.

Limitation [1.9] recites “wherein rotation of the winder hub tensions or relaxes the line depending upon the direction of rotation of the winder hub, and wherein operation of the winding mechanism to apply tension to the line opens and closes the umbrella canopy in response to movement of the line.” Ex. 1001, 5:3–8. Limitation [1.10] recites “wherein the angle of the umbrella canopy with respect to the main pole can be controlled by moving the sliding member along the main pole.” *Id.* at 5:9–11. For limitations [1.9] and [1.10], Petitioner states “See above.” Pet. 20.

b) Patent Owner’s Arguments

Patent Owner asserts that that Liu ’453 does not disclose limitations [1.3], [1.7], [1.8], and [1.9]. Prelim. Resp. 24–31. Specifically, Patent Owner argues that Liu ’453 does not show the claimed structural features and how they are put together. *See* Prelim. Resp. 24–25, 30.

With respect to limitations [1.7], [1.8], and [1.9], Patent Owner argues “the Liu design patent fails to disclose the line or the winding mechanism . . . [and] the specific claimed routing arrangement of the tension line of the ’492 patent.” *Id.* at 27. Patent Owner contends that Petitioner’s assertions as to Liu ’453’s teachings are “at best, mere possibilities among many.” *Id.*; *see also id.* at 29. For example, with respect to the claimed winding mechanism, Patent Owner argues that Liu ’453 “shows a projection from the collar, but this may be a frictional lock or simply, a hand grip.” *Id.* at 27. Patent Owner further contends that “[o]pening and closing of the canopy may also [be] accomplished with a mechanical arrangement within the canopy and without any winding mechanism.” *Id.* Regarding the claimed line, Patent Owner argues that Liu ’453 “may include no line, and the canopy may be opened and closed manually.” *Id.* As a result, Patent Owner contends that a person of ordinary skill in the art “would not recognize the line as being necessarily present, or present along the claimed path of the ’492 patent.” *Id.* at 27–28. Similarly, Patent Owner argues that even if Liu ’453 includes a winder hub, it may be unidirectional or may simply control movement of the collar and be unconnected to the canopy. *Id.* at 28–29. With respect to the alleged locking mechanism of limitation [1.3], Patent Owner similarly contends “that alleged button may be a hand grip, or that the collar may rely on static friction between the collar and the vertical support to lock the collar in place.” *Id.* at 29–30.

c) Analysis

A patent is unpatentable for anticipation if a single prior art reference discloses each and every limitation of the claimed invention, either expressly

or inherently. *Schering Corp. v. Geneva Pharms., Inc.*, 339 F.3d 1373, 1379 (Fed. Cir. 2003). When evaluating a single prior art reference, the reference must be “considered together with the knowledge of one of ordinary skill in the pertinent art.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (quoting *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)). Accordingly, “the dispositive question regarding anticipation [i]s whether *one skilled in the art* would reasonably understand or infer from the [prior art reference’s] teaching’ that every claim element was disclosed in that single reference.” *Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1368 (Fed. Cir. 2003) (alterations in original) (quoting *In re Baxter Travenol Labs.*, 952 F.2d 388, 390 (Fed. Cir. 1991)).

We agree with Patent Owner that Petitioner has not sufficiently shown that Liu ’453 discloses limitations [1.3], [1.7], [1.8], and [1.9]. Because Liu ’453 is a design patent, it provides little express disclosure, aside from the ornamental design shown in the figures. The figures simply do not show the “locking means,” “winding mechanism,” “line,” “rotation of the winder hub” and “operation of the winding mechanism,” as recited in these limitations. Petitioner cites to the van Lierop Declaration in support of its contentions that one of skill in the art would “readily recognize” the “locking means” and “line” based on the disclosure in the figures; however, the cited testimony simply repeats what is stated in the Petition, with no additional explanation or analysis. *See* Pet. 16, 19 (citing Ex. 1011 ¶ 29); *see* 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”).

Further, although Petitioner asserts that Liu '453 discloses the claimed “locking means,” “winding mechanism,” and “line,” Petitioner also provides citations to the Bertola, Wang, Liu '068, and Harbaugh references. Although additional references may be used to confirm the contents of the allegedly anticipating reference, anticipation does not permit an additional reference to supply a missing claim limitation. *See Studiengesellschaft Kohle, m.b.H. v. Dart Indus., Inc.*, 726 F.2d 724, 727 (Fed. Cir. 1984) (rejecting an anticipation challenge where the challenger relied on two additional articles “for a very specific teaching, not for any light they shed on what [the anticipatory reference] would have meant to those skilled in the art”). Petitioner’s contentions as to limitations [1.3], [1.7], and [1.8] attempt to improperly “combine the teachings of the references to build an anticipation.” *Id.* For example, arguing that a “locking means,” “winding mechanism,” and “line” are “well-known” or “shown” in another reference does not establish that they are disclosed in Liu '453. We note that the “locking means” cited in Bertola and Wang do not even resemble Liu '453’s alleged “locking means.” Nor does Liu '453’s alleged “winding mechanism” resemble the “typical crank/line mechanism” that Petitioner cites in Liu '068 and Harbaugh.

To the extent that Petitioner is relying on an inherency argument, Petitioner has not shown that either. An additional reference may be used to show a characteristic not expressly discussed in the anticipating reference is an inherent characteristic. *Cont’l Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991). “Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the

reference, and that it would be so recognized by persons of ordinary skill.”

Id. However, inherency

may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient. [Citations omitted.] If, however, the disclosure is sufficient to show that the natural result flowing from the operation as taught would result in the performance of the questioned function, it seems to be well settled that the disclosure should be regarded as sufficient.

Id. at 1269 (citing *In re Oelrich*, 666 F.2d 578, 581 (CCPA 1981)). The Federal Circuit explained that “[t]his modest flexibility in the rule . . . accommodates situations where the common knowledge of technologists is not recorded in the reference; that is, where technological facts are known to those in the field of the invention, albeit not known to judges.” *Id.*

This is not such a scenario. As Patent Owner points out, Petitioner has not established that the “locking means,” “winding mechanism,” or “line,” and “rotation of the winder hub” and “operation of the winding mechanism” are necessarily present in Liu ’453. Rather, Liu ’453 provides no disclosure at all as to how its canopy is raised and lowered. In short, we agree with Patent Owner that “the Petition appears to be conflating standards for whether a feature is inherent within the Liu design patent with whether a feature is obvious in light of the Liu design patent.” Prelim. Resp. 30.

In addition, we also find that Petitioner’s analysis, “See above,” for limitations [1.9] and [1.10] does not describe with particularity the evidence relied upon in support of these limitations, and, therefore, fails to comply

with the requirements of 35 U.S.C. § 312(a)(3) and 37 C.F.R. § 42.104(b)(4)–(5). *See infra* Section III.D.4.b.

Accordingly, Petitioner has not shown a reasonable likelihood of success that Liu '453 anticipates claim 1 of the '492 patent.

3. Analysis of Dependent Claims 5–7

Claims 5–7 depend from claim 1. Petitioner's arguments and evidence with respect to claims 5–7 do not cure the deficiencies noted above for claim 1. Accordingly, Petitioner has not shown a reasonable likelihood of prevailing with respect to claims 5–7.

4. Analysis of Dependent Claims 2–4

Claims 2–4 depend from claim 1. Petitioner does not present an obviousness ground or analysis over Liu '453 alone, or in combination with other references, for claim 1. *See* Pet. 14–20, 25–26. Petitioner's arguments and evidence with respect to claims 2–4, therefore, do not cure the deficiencies noted above for claim 1. Accordingly, Petitioner has not shown a reasonable likelihood of prevailing with respect to claims 2–4.

D. Obviousness Based on Liu '068, Liu '453, Liu '171, Wang, Bertola, and Tung

Petitioner contends claims 1–7 are obvious over Liu '068 combined with Liu '453, Liu '171, Wang, Bertola, and Tung. Pet. 5. For the reasons that follow, we are not persuaded that Petitioner has established a reasonable likelihood of prevailing on its assertion that claims 1–7 are obvious.

1. Liu '068 (Ex. 1005)

Liu '068 is titled “Side-Supporting Umbrella.” Ex. 1005, code (54). Figure 2A, reproduced below, depicts a schematic drawing of a tilt-adjusting umbrella according to one embodiment.

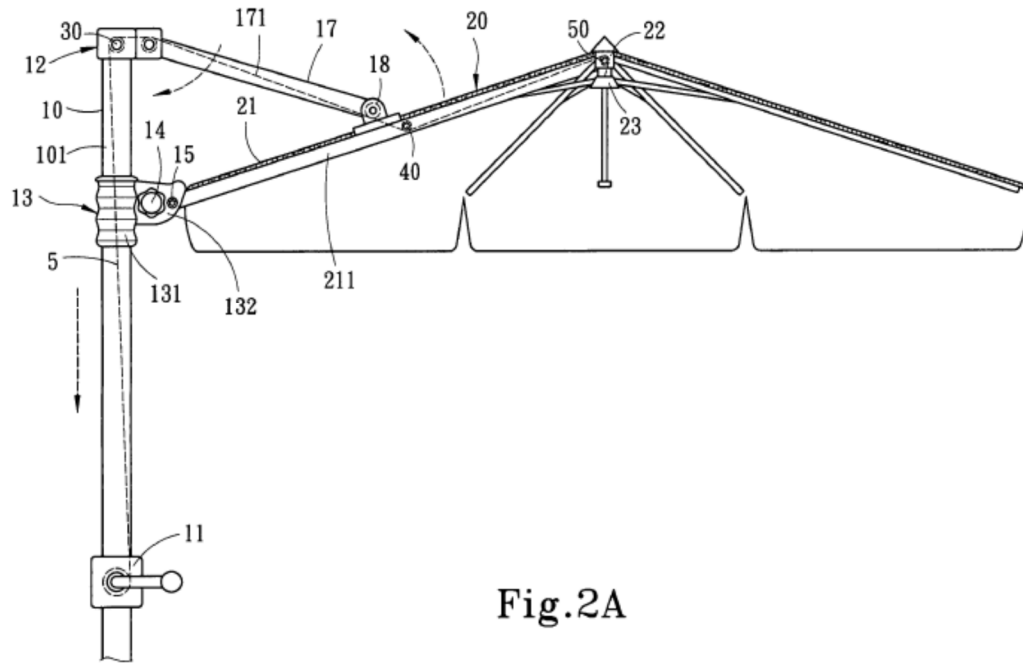


Figure 2A depicts mast 10, pivotally connected to supporting arm 21 of a canopy 20. Ex. 1005, 3:18–21. Mast 10 and canopy 20 are interconnected with a connecting brace 17, which is pivotally connected to supporting arm 21. *Id.* at 3:21–24. A crank-driving winder 11 is installed at a suitable position on the mast 10, and one end of a line 5 is wound on the winder 11 in order to control the canopy 20 to open or close. *Id.* at 3:24–27.

2. *Wang (Exhibit 1010)*

Wang is titled “[a] simple banana cantilever umbrella” and generally describes a banana cantilever umbrella with, inter alia, “a sliding sleeve with a locking device is mounted around the supporting pole, and the sliding sleeve includes a rope winding device and is connected to the lower end of the cantilevered beam.” Ex. 1010, codes (54), (57).

3. *Huali (Exhibit 1012)*

Huali is titled “Telescopic Umbrella.” Figure 1, reproduced below, shows a partially cut lateral view of an embodiment of the telescopic umbrella.

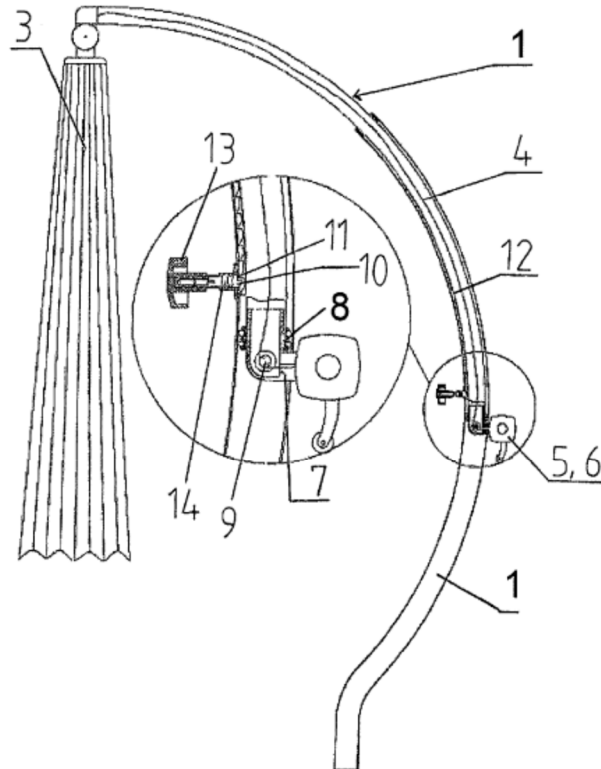


Fig. 1

Figure 1 depicts lower upright stand 1 with umbrella canopy 3.

Ex. 1012 ¶ 37. Umbrella canopy 3 can be opened and closed by means of a sheathed cable/Bowden control 4. *Id.* ¶ 38. The sheathed cable/Bowden control 4 is connected to a control device 5 that can be operated with it. *Id.* In this embodiment, control device 5 is a crank shaft 6. *Id.*

4. Analysis of Independent Claim 1

Petitioner provides side-by-side comparisons of the claimed umbrella and the umbrella depicted in Liu '068. Pet. 27. In addition, Petitioner provides a claim chart identifying where it asserts Liu '068 and other asserted references disclose the limitations in claims 1–7. *Id.* at 28–32.

a) Petitioner's Contentions

Limitation [1.7] recites “a winding mechanism having a winder hub around which a line can be wound, the winder hub being mounted to the sliding member and movable therewith.” Ex. 1001, 4:63–65. Petitioner asserts that Liu '068 discloses a “crank-driving winder,” but “does not explicitly disclose installing the crank-driving winder at the sliding collar 13, but this alternative configuration was well known in the art and is disclosed, for example, in the Wang Patent, the Liu '453 Patent, and the Huali Publication, and would be an obvious modification.” Pet. 30–31 (citing Ex. 1010, Figs. 1, 2, Abstr.; Ex. 1007, Fig. 6; Ex. 1012, Fig. 1).

Limitation [1.8] recites “a line having a first end that winds around the winder hub, an intermediate portion extending from the winder hub along the arm to the umbrella canopy, and a second end that engages the umbrella canopy.” Ex. 1001, 4:66–5:2. Petitioner cites to column 3, lines 23–26 of Liu '068, which states “[a] crank-driving winder 11 is installed at a suitable position of the mast 10, and one end of a line 5 is wound on the winder 11 in order to control the canopy 20 to open or close.” Pet. 31.

Limitation [1.9] recites “wherein rotation of the winder hub tensions or relaxes the line depending upon the direction of rotation of the winder hub, and wherein operation of the winding mechanism to apply tension to

the line opens and closes the umbrella canopy in response to movement of the line.” Ex. 1001, 5:3–8. Limitation [1.10] recites “wherein the angle of the umbrella canopy with respect to the main pole can be controlled by moving the sliding member along the main pole.” Ex. 1001, 5:9–11. For limitations [1.9] and [1.10], Petitioner states “See above.” Pet. 31–32.

b) Analysis

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1358, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (2012)); *see also Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016) (“It is of the utmost importance that petitioners in the IPR proceedings adhere to the requirement that the initial petition identify ‘with particularity’ the ‘evidence that supports the grounds for the challenge to each claim.’” (quoting 35 U.S.C. § 312(a)(3))). Our rules further address the showing required in a petition. In particular, 37 C.F.R. § 42.104(b)(2) provides that the petition must set forth “the patents or printed publications relied upon for each ground,” 37 C.F.R. § 42.104(b)(4) provides that “[t]he petition must specify where each element of the claim is found in the prior art patents or printed publications relied upon” (emphasis added), and 37 C.F.R. § 42.104(b)(5) adds that the Petition must “*identify[] specific portions of the evidence that support the challenge*” (emphasis added). For the reasons discussed below, this ground as set forth in the Petition fails to comply with the requirements of 35 U.S.C. § 312(a)(3) and 37 C.F.R. § 42.104(b)(2), (4), and (5).

Petitioner presents this ground as follows: “The Liu ‘068 Patent renders obvious claims 1–7 in view of the Liu ‘453 Patent, the Liu ‘171 Patent, the Wang Patent, the Bertola Patent, and the Tung Patent.” Pet. 5, 26. Petitioner’s stated ground does not specify which additional references it is relying on for each claim, but, rather, indicates that it is relying on all of the stated references for each of claims 1–7.

As set forth in the chart for limitation [1.7], Petitioner states that the “alternative configuration was well known in the art and is disclosed, *for example*, in the Wang Patent, the Liu ‘453 Patent, *and* the Huali Publication.” Pet. 30–31 (emphasis added). Petitioner’s language indicates that it is relying at least three references to each teach the “alternative configuration,” but the language “for example,” in conjunction with the stated grounds, indicates that it may also be relying on other references not directly cited in the chart. In addition, the Huali reference is not included in the stated grounds, and is only cited in the chart. *See id.* at 5. As a result, it is not clear from the Petition what specific combination of references Petitioner is relying upon to teach or suggest independent claim 1. It is also not clear why Petitioner is relying on at least three different references to teach limitation [1.7], and whether all three are necessary to establish obviousness of claim 1 under Petitioner’s asserted ground. As discussed above, we do not find that Petitioner has sufficiently shown that Liu ‘453 discloses limitation [1.7]. With respect to the Huali reference, Petitioner simply cites to Figure 1, with no additional explanation or analysis indicating what particular teaching of Huali is relied upon.

For limitation [1.8], Petitioner does not provide any supporting evidence or citation for the latter part of the limitation, “an intermediate portion extending from the winder hub along the arm to the umbrella canopy, and a second end that engages the umbrella canopy.”

For limitations [1.9] and [1.10], Petitioner provides no analysis at all, and merely directs us to “See above.”

Accordingly, the Petition does not sufficiently set forth the patents or printed publications relied upon for this ground, and the Petition does not articulate, with reasonable clarity, the particular teachings of the prior art references that are relied upon to teach limitations [1.7], [1.8], [1.9], and [1.10]. Accordingly, the Petition fails to comply with the requirements of 35 U.S.C. § 312(a)(3) and 37 C.F.R. § 42.104(b)(2), (4), and (5). We, therefore, determine that, on this record, Petitioner has not shown a reasonable likelihood of success that Liu ’068 in combination with Liu ’453, Liu ’171, Wang, Bertola, and Tung renders obvious claim 1 of the ’492 patent.

5. Analysis of Dependent Claims 2–7

Claims 2–7 depend from claim 1. Petitioner’s arguments and evidence with respect to claims 2–7 do not cure the deficiencies noted above for claim 1. Accordingly, Petitioner has not shown a reasonable likelihood of prevailing with respect to claims 2–7.

IV. CONCLUSION

After considering the evidence and arguments presented in the Petition and Preliminary Response, we determine that Petitioner has not established a reasonable likelihood of prevailing on its assertion that at least one claim of the '492 patent is unpatentable. Accordingly, we do not institute an *inter partes* review.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is DENIED and no trial is instituted.

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