

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SHORESHADE LLC

Petitioner

v.

SOLBELLO, INC.

Patent Owner

U.S. Patent No. RE50606
Issued September 30, 2025

PETITION FOR POST GRANT REVIEW

(§§ 102, 103, 112)

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EXHIBIT LIST

Exhibit No.	Description
1001	U.S. Patent No. RE50606 (“the Reissue Patent”)
1002	Declaration of Stephen Melamed
1003	Mr. Melamed’s Curriculum Vitae
1004	Prosecution History for Reissue Patent
1005	U.S. Pat. App. No. 62/892,700 (“Provisional Application”)
1006	Prosecution History for Provisional Application
1007	PCT/US2020/038920 (“PCT Application”)
1008	Prosecution History for PCT Application
1009	U.S. Pat. No. 11,596,211 (“Original Patent”)
1010	Prosecution History for Original Patent
1011	Prosecution History for Related European Pat. App. No. 4,585,774 (the “European Application”).
1012	U.S. Pat. Publ. No. 2013/0019794 to Neal (“Neal”)
1013	DE202014103145U1 (“German Reference”)
1014	Certified Translation of German Reference
1015	U.S. Pat. Publ. No. 2008/0196754 to Saiz (“Saiz”)
1016	U.S. Pat. No. 10,190,330 to Barnes et al. (“Barnes”)
1017	Initial Litigation Complaint, Filed Nov. 7, 2025
1018	First Motion for Preliminary Injunction, Filed Nov. 7, 2025

1019	Petitioner's Motion to Dismiss Initial Litigation Complaint, Filed November 19, 2025
1020	Petitioner's Response to First Motion for Preliminary Injunction, Filed November 19, 2025
1021	Order Denying First Motion for Preliminary Injunction, Entered December 22, 2025
1022	Rule 26(f) Report in Litigation, Filed January 27, 2026
1023	Order Staying Litigation, Entered February 23, 2026
1024	Second Motion for a Preliminary Injunction, Filed April 30, 2026
1025	Response to Second Motion for Preliminary Injunction, Filed May 7, 2026
1026	Order Denying Second Motion for Preliminary Injunction, Entered May 18, 2026
1027	Scheduling Order
1028	Solbello's Infringement Contentions of June 15, 2026
1029	Schulze Declaration
1030	Import Records for Solbello, Inc.
1031	Country of Origin Information on Solbello Box
1032	Merriam-Webster Definition for Cap

I. INTRODUCTION

ShoreShade LLC (“ShoreShade”) respectfully requests that the Board review and cancel as unpatentable under 35 U.S.C. §§ 102, 103, and 112 (for a lack of written description support and lack of enablement) claims 44, 45, and 47 (“Challenged Claims”) of U.S. Patent No. RE50606 (“the Reissue Patent,” Ex. 1001).

II. MANDATORY NOTICES

A. Real Party-in-Interest

The real party-in-interest is ShoreShade.

B. Related Matters

Pursuant to 37 C.F.R. § 42.8(b)(2), to the best knowledge of Petitioner, the Reissue Patent is or has been involved in the following cases (“Related Litigation”):

Case Heading	Number	Court	Filed
Solbello, Inc. v. ShoreShade, LLC	1:25-cv-00267	S.D. Ga.	Nov. 7, 2025

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III. GROUNDS FOR STANDING

Petitioner certifies that the Reissue Patent is eligible for post-grant review because it contains at least one claim with an effective filing date after March 16, 2013. *See* AIA §§ 3(n)(1) and 6(f)(2)(A). Petitioner is not barred or estopped from requesting post-grant review challenging the patent claims on the grounds identified in this petition. Petitioner has not filed a civil action challenging the validity of any claim of the Reissue Patent.

This petition is in compliance with 35 U.S.C. § 325(f) as the claims that Petitioner seeks to cancel in the Reissue Patent are not “identical to or narrower than a claim in the original patent from which the reissue patent was issued.”

IV. THE REISSUE PATENT

A. Overview of the Reissue Patent

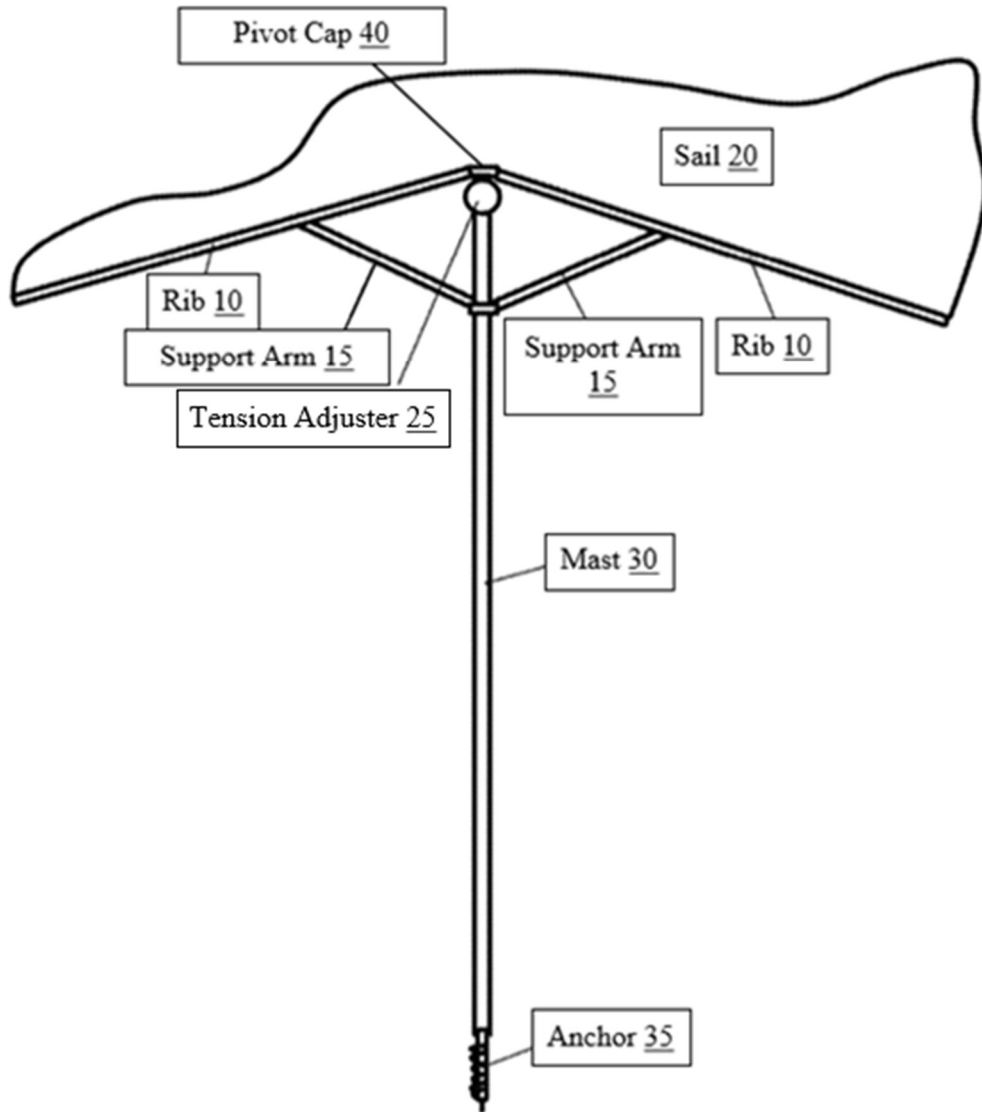
The Reissue Patent “is directed to a self-adjusting sun shade assembly.” Reissue Patent at 1:24–25. The term “sun shade assembly” is described as “e.g., an assembly that provides shade from the sun.” Reissue Patent at 1:61–62.

In the background, the Reissue Patent discusses “conventional beach umbrellas,” stating that:

Conventional beach umbrellas include a single central support pole with a pointed lower end that is inserted directly into the sand. Conventional umbrellas further include an overhead fabric covering attached to the support pole. However, the main problem with the canopy design of traditional umbrellas is that the position of the umbrella constantly shifts in response to wind gusts. As a result, the user must frequently readjust the umbrella to compensate for the shifts in movement. In addition, conventional umbrellas can easily tip over or be blown down the beach where they can cause hassle to the owner as well as injury to other beachgoers. Conventional umbrellas are also prone to wind breakage. It would therefore be beneficial to provide an umbrella with improved stability in response to the wind blowing.

Reissue Patent at 1:43–54 (emphasis added).

An annotated version of FIG. 1 of the Reissue Patent is provided below showing names of the different components.



An anchor 35 is located at the bottom end of the mast 30 so that the assembly can “be secured into a support surface (e.g., sand).” Reissue Patent at 6:3–5. “The term ‘anchor’ broadly refers to any element that provides weight and/or a mechanism by which to secure assembly 5 into a support surface (e.g., sand).” Reissue Patent at 8:49–51. No embodiment is shown where an anchor 35 is not used. The Reissue

Patent describes the anchor 35 as comprising an auger 36 in reference to FIG. 6. Reissue Patent at 8:59–63.

The ribs 10 and support arms 15 rotate about the mast 30, thereby self-adjusting the direction of sail 20 in response to the wind blowing. Reissue Patent at 6:5–8. The Reissue Patent touts the relative rotation between a rotatable sail and a non-rotatable mast as an important feature. Discussing “the assembly” as a whole rather than any particular embodiment, the Reissue Patent states “because the sail rotates relative to the mast it prevents loosening the auger position and thereby causing failure of the assembly.” Reissue Patent at 12:42–44 (emphasis added).

All discussion in the Reissue Patent indicates that rotation of the ribs 10 and sail 20 occurs as a result of rotation of the ribs relative to a non-rotatable mast. The Reissue Patent attempts to differentiate its alleged invention from the prior art, stating:

Because the support can rotate and adjust in response to the wind, the assembly has a reduced likelihood of falling over as a result [of] heavy winds and/or when the wind shifts directions. Specifically, when the wind shifts direction, the sail will self-adjust (e.g. the pivot cap, ribs, sail, support arm, and slider rotate about the non-movable mast in response to the wind blowing and changing direction).”

Reissue Patent at 12:36–42 (emphasis added). The Reissue Patent states that a tension adjuster 25 is included to enable adjustment “to achieve a desired amount of rotation of the pivot cap, ribs, support arms, slider, and sail relative to the non-movable mast” and that “[t]he sun shade assembly self-adjusts in response to the blowing of the wind.” Reissue Patent at 3:7–10.

The Reissue Patent notes that the slider and support arms (to which the ribs are attached) “can rotate freely about the mast” and that “the mast remains in a stationary position, while the slider (and attached support arms and ribs) rotate in response to the wind blowing.” Reissue Patent at 7:33–38. The Reissue Patent also states:

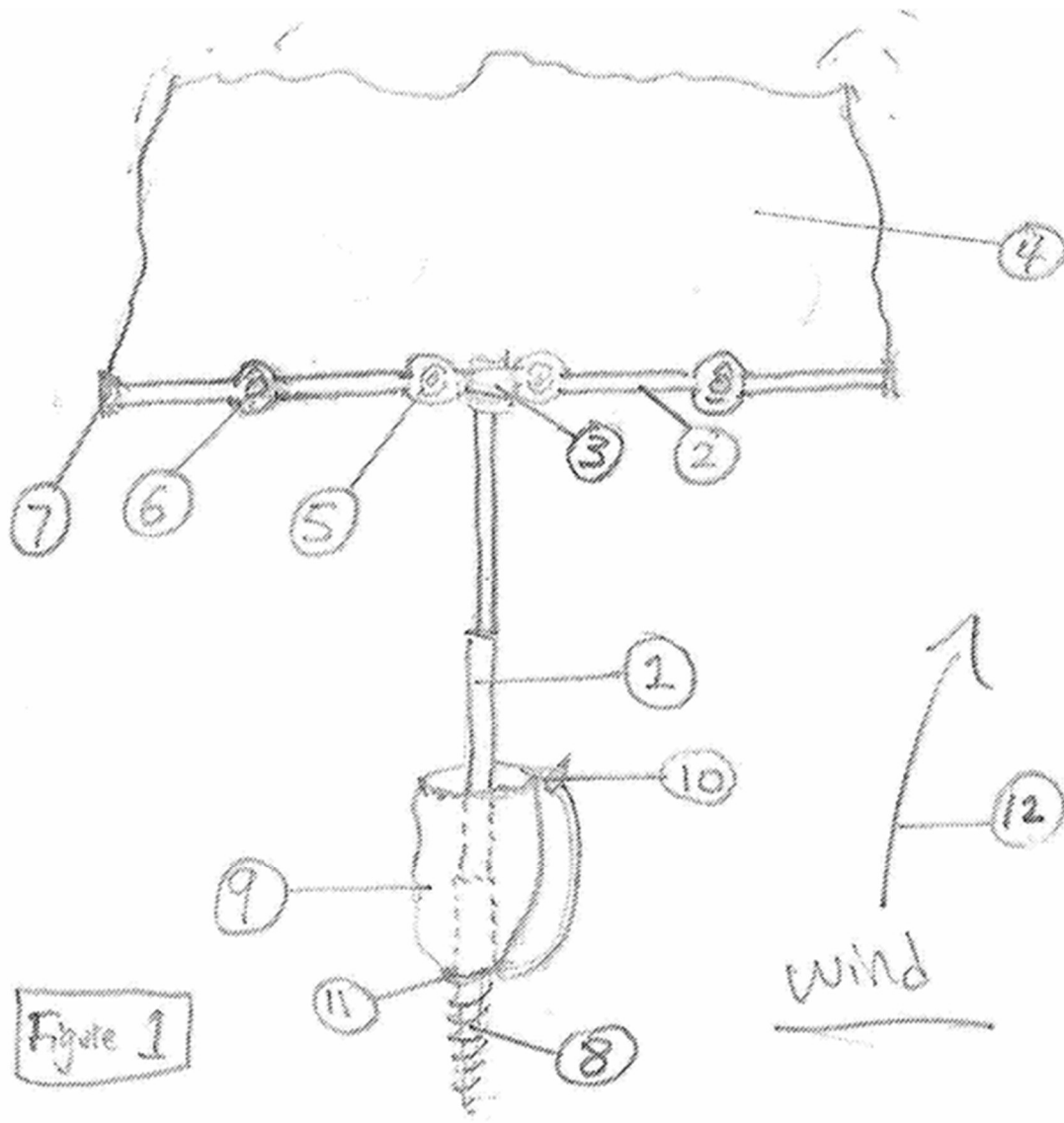
FIG. 6 illustrates one embodiment of anchor 35 comprising auger 36 that can be configured as any type of spike, helical corkscrew, or shaft optionally having a threaded portion capable of being turned and embedding itself into a support surface (e.g., sand at a beach). Lower end 38 of the auger can be configured as a spike or pointed end to initiate insertion of the anchor into the support surface. Because auger 36 is inserted into a support surface, it does not rotate and remains in the inserted position until the user desires to remove it. Likewise, the mast does not rotate in response to wind conditions due to its attachment to the anchor.

Reissue Patent at 8:59–9:2 (emphasis added).

B. Prosecution History

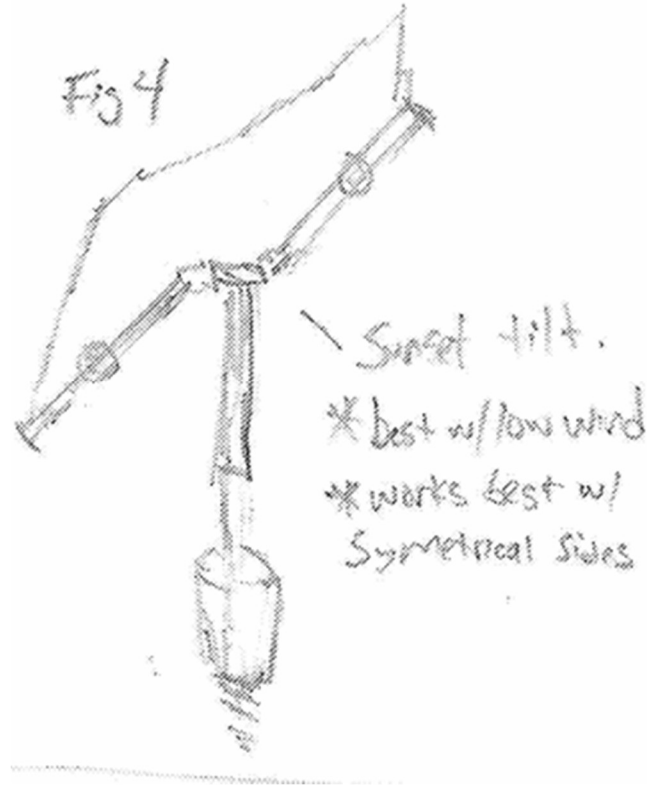
i. Provisional Patent Application

Patent Owner initially filed provisional application No. 62/892,700 (“Provisional Application”) on August 28, 2019. Ex. 1005. In the Provisional Application, the Patent Owner described the “invention,” the “claimed invention,” and “our device,” showing and describing only an embodiment in which the mast is non-rotatably secured to the sand using an auger 8. Provisional Application (Ex. 1005) at 1–3. Figure 1 of the Provisional Application is shown below:



The Provisional Application stated that the assembly included a telescoping mast 1, ribs 2, a “[t]ension adjustable and pivoting point at T-connection” 3, ribs including main rib hinges 5 and secondary rib hinges 6, and an auger bottom 8. Provisional Application (Ex. 1005) at 2. The auger bottom was described as being used for sand application, and the telescoping mast 1 anchors/stakes in the ground to hold up the frame. Provisional Application (Ex. 1005) at 2.

Figure 4 of the Provisional Application shows a sunset tilt for the assembly. In this sunset tilt, the sail itself extends in a plane offset from a horizontal plane.



The Provisional Application also describes deficiencies in existing shade umbrellas, stating “[s]hade umbrellas are dangerous in the wind,” that they “easily break in the wind,” and that they “don’t do well in the wind and they are dangerous.” Provisional Application at 1.

ii. PCT Application

On June 22, 2020, Patent Owner filed an application under the Patent Cooperation Treaty, PCT/US2020/038920 (“PCT Application”). Ex. 1007. This PCT Application claimed priority back to the Provisional Application. The

prosecution history for the PCT Application is submitted herewith as Ex. 1008 (retrieved from materials available in USPTO databases).

iii. Non-provisional Patent Application U.S. Pat. App. No. 17/417,739 results in Original Patent

On June 23, 2021, Patent Owner entered the national phase in the USPTO under 35 U.S.C. § 371 based on the PCT Application. The national phase application was given non-provisional patent application No. 17/417,739. As can be seen in the prosecution history for this application (Exhibit 1010), the patent examiner allowed the application without entering any office actions. Ex. 1010. This patent application ultimately issued as U.S. Pat. No. 11,596,211 (“Original Patent”). Ex. 1009.

iv. Reissue Patent Application U.S. Pat. App. No. 18/367,224 results in Reissue Patent

On September 12, 2023, Patent Owner filed reissue patent application No. 18/367,224 seeking to correct alleged defects in the Original Patent. Ex. 1004 at 119, 122, 339 (stating that Original Patent was wholly or partly inoperative or invalid because the Patent Owner claimed more or less than it had a right to claim in the Original Patent). The prosecution history for the reissue patent application is provided as Exhibit 1004. After corrections were made, the reissue patent application eventually claimed priority back to U.S. Pat. App. No. 17/417,739, the PCT Application, and the Provisional Application. Ex. 1004 at 82–83.

The examiner entered a non-final rejection on April 15, 2025. Ex. 1004 at 145–67. This non-final rejection rejected all of pending claims 21–57 on the basis that the reissue declaration was defective. Ex. 1004 at 158–59. Claims 35–40 were rejected under 35 U.S.C. § 112(b) as being indefinite. In addition, claims 41–43, 45, 46, 54, 55, and 57 were rejected under 35 U.S.C. § 102(a)(1) as being anticipated by U.S. Pat. Publ. No. 2008/0196754 to Saiz. Ex. 1004 at 162–65.

Patent Owner filed an Amendment in response to the non-final office action on May 14, 2025. In the Amendment, Patent Owner amended the claims to incorporate the subject matter of claims that were presumed to be allowable if rewritten into independent form. Ex. 1004 at 115. Patent Owner also filed a fresh Reissue Application Declaration. Ex. 1004 at 75. In this, Patent Owner stated as follows:

As required under 37 CFR 1.175, Applicant respectfully submits the following statement of at least one error which is relied upon to support the present reissue application. Claim 1 of Applicant's original patent (U.S. Pat. No. 11,596,211) contains certain unnecessary limitations which render the patent wholly or partially inoperative. Specifically, Claim 1 of the original patent recites the unnecessary limitation "at least one support arm". Original Claim 1 is broadened in the Preliminary Amendment filed on February 5, 2024 by removing this limitation from newly added independent Claims 41, 47, 53, 54.

Ex. 1004 at 75. Claim 47 turned into what is now claim 44 in the Reissue Patent. *Cf.* Ex. 1004 at 106–07 (Original claim 47) to Ex. 1001 at claim 44. Nothing was stated in the Reissue Application Declaration about Patent Owner attempting to broaden this claim to cover a device where the entire device (including the mast) could rotate relative to the supporting surface. Ex. 1004 at 75.

The Examiner entered a Notice of Allowance on August 21, 2025. Ex. 1004 at 11–20. The Notice of Allowance provided a statement of reasons for allowance for each of the independent claims, i.e., claims 21, 35, 41, 47, 53, and 54. Ex. 1004 at 16–18. The reasons for allowance further stated:

9. The closest prior art, to Saiz, does not teach nor render obvious, with any other combination of prior art, the above claimed combinations. Saiz does teach rotation, but this rotation is effected by the mast, and not relative to the mast. See para. [0008]. There would be no reason to modify Saiz to have the sail and pivot ribs (from claim 54) of figure 1 of Saiz to rotate *relative to the mast*, especially since there is no teaching in the prior art of such an arrangement while meeting all the other limitations as well.

Ex. 1004 at 18 (emphasis in original). After payment of the issue fee on August 21, 2025, the Reissue Patent granted on September 30, 2025. Ex. 1001. Upon the

issuance of the Reissue Patent, the Original Patent was surrendered. 35 U.S.C. § 251(a) (stating that reissue occurs only “on the surrender of such [original] patent”).

V. CLAIM CONSTRUCTION

In a PGR, the Board construes claims according to *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc), with claims being construed “in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.200(b). The Board only construes the claims to the extent necessary to resolve the underlying controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

In applying *Phillips* to construe a claim term, “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Phillips*, 415 F.3d at 1313. For this reason, the specification is often “the single best guide to the meaning of a disputed term.” *Id.* at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). Where the specification “repeatedly, consistently, and exclusively” shows a component as having a particular feature, the claim term may be defined by implication to include this feature. *In re Abbott*

Diabetes Care Inc., 696 F.3d 1142, 1149–50 (Fed. Cir. 2012).¹ Courts also look to the prosecution history with the patent office to understand the meaning of a claim term. *Phillips*, 415 F.3d at 1314.

A. “at least one rib . . . configured to rotate relative to the supporting surface”

The meaning of this limitation has been the focus of much discussion in the Related Litigation. In connection with two preliminary injunction motions, Patent Owner agreed with Petitioner that the limitation should not be construed to mean simply that the whole assembly (mast and all) could rotate with respect to the ground. As a result, the limitation was construed for purposes of deciding those motions (both of which were denied by the court) to mean “at least one rib . . . specifically designed to rotate relative to the mast.” Because Patent Owner acknowledged the narrower construction, it was able to argue that Petitioner’s invalidity argument under Section 112 was obviated.

Now, in supplemented infringement contentions (Ex. 1028) served June 15, 2026, Patent Owner appears to argue that a different construction, where “configured to

¹ In the Related Litigation, Patent Owner initially conceded Petitioner’s narrower construction of the “at least one rib” limitation discussed below but has recently argued for a broader construction of this limitation. Petitioner disagrees with the broader construction and maintains the construction presented in the Related Litigation for consistency.

rotate relative to the supporting surface” only requires capability of rotating relative to the ground, would be appropriate.

'606 Patent Claim	Limitation	Literal or Doctrine of Equivalents
44 (cont'd)	<i>[said rib] configured to rotate relative to the supporting surface</i>	Should the Court adopt ShoreShade’s preferred construction and construe “configured to” to mean “specifically designed to,” and “supporting surface” to mean “mast”: Doctrine of Equivalents Should the Court adopt a broader construction, e.g., that the shade need only rotate relative to the ground (or beach): Literal

As will be discussed below, the broader “need only rotate relative to the beach” interpretation invokes substantial validity issues that are appropriate for resolution in a PGR.

Petitioner’s Position

The limitation in claim 44 of “at least one rib . . . configured to rotate relative to the supporting surface” does not mean that the rib can be fixed to the mast and rotate as the mast itself rotates relative to the “supporting surface.” Instead, “configured to rotate” means that something about the ribs themselves makes them specifically designed to rotate relative to the supporting surface—a rib that is fixedly attached to the mast so it rotates with the mast is not “configured to” rotate but is merely along for the

ride. *Cf. Ball Aerosol & Specialty Container, Inc. v. Ltd. Brands, Inc.*, 555 F.3d 984, 995 (Fed. Cir. 2009) (holding that the mere fact that the accused product “was reasonably capable of being put into the claimed configuration is insufficient for a finding of infringement” where the claim language itself specified that infringement occurs only if the accused product was configured with a cover used as a base underneath a candle holder).

Patent Owner uses the term “capable of” in several instances in the Reissue Patent. Reissue Patent at 8:62, 9:32; 12:61. This shows that Patent Owner knew how to use this “capable of” term when it wanted to, and, by using a different “configured to” term in claim 44, it intended a different meaning.

In fact, the Reissue Patent touts the relative rotation between sail and mast as an important feature, stating: “because the sail rotates relative to the mast it prevents loosening the auger position and thereby causing failure of the assembly.” Reissue Patent at 12:42–44. Throughout the specification, the ribs are repeatedly and exclusively described as being rotatable about the non-movable mast with an anchor (e.g., auger) at the base of the non-movable mast. Reissue Patent at 2:2–3; 2:10–12; 2:14–16; 3:7–9; 6:5–8; 6:62–65; 7:33–37; 12:39–42. Given the repeated, consistent, and exclusive discussion that the mast is not capable of moving and the ribs are configured to rotate relative to the mast, the claim term has been defined by implication.

The Reissue Patent states “because the sail rotates relative to the mast it prevents loosening the auger position and thereby causing failure of the assembly.” Reissue Patent at 12:42–45. This statement is made in a passage where the Reissue Patent is discussing the assembly as a whole and its benefits over the prior art, further demonstrating the importance of the non-movable nature of the mast. *See* Reissue Patent 12:36–13:15 (discussing “the assembly,” “the disclosed assembly,” etc. in touting benefits over the prior art, shifting from language in other locations merely discussing embodiments and using optional language). The Reissue Patent also denigrates “conventional beach umbrellas” that include “a single central support pole with a pointed lower end that is inserted directly into the sand.” Reissue Patent at 1:40–44. A support pole with a pointed lower end rather than an “anchor” is capable of rotating with respect to the ground, showing that Patent Owner was distinguishing rotatable masts. According to the Reissue Patent, “[i]t would therefore be beneficial to provide an umbrella with improved stability in response to the wind blowing.” Reissue Patent at 1:54–56. The Provisional Application also describes deficiencies in existing shade umbrellas, stating “[s]hade umbrellas are dangerous in the wind,” that they “easily break in the wind,” and that they “don’t do well in the wind and they are dangerous.” Provisional Application at 1.

When the specification and prosecution history are read as a whole, it becomes clear that the Patent Owner believed that rotation of the central support pole in the

conventional beach umbrellas was something that could lead to failure of the conventional beach umbrella. By including an anchor (e.g., auger) that prevents rotation of the mast, the alleged conventional failures can be avoided. Thus, the Patent Owner disparages any embodiment where the mast rotates relative to the support surface, further demonstrating that it is appropriate to limit the scope of the claim. *See, e.g., Inpro II Licensing, S.A.R.L. v. T-Mobile USA Inc.* 450 F.3d 1350, 1354–55 (Fed. Cir. 2006).

Based on the above, Petitioner believes that “**at least one rib . . . configured to rotate relative to the supporting surface**” should be construed to mean “**at least one rib . . . specifically designed to rotate relative to the mast.**”

B. Preamble not limiting

As a general rule, a preamble is not considered limiting. *Bio-Rad Lab 'ys, Inc. v. 10X Genomics Inc.*, 967 F.3d 1353, 1369 (Fed. Cir. 2020). “If the claim uses the preamble only to state a purpose or intended use for the invention, then the preamble is not limiting.” *Bio-Rad*, 967 F.3d at 1369 (quoting *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002)). “[P]reambles describing the use of an invention generally do not limit the claims because the patentability of apparatus or composition claims depends on the claimed structure, not on the use or purpose of that structure.” *Catalina*, 289 F.3d at 809.

A preamble may be limiting if it is “necessary to give life, meaning, and vitality” to the claim. *Bio-Rad*, 967 F.3d at 1369 (quoting *Pitney Bowes, Inc. v.*

Hewlett-Packard Co., 182 F.3d 1298, 1305 (Fed. Cir. 1999)). However, the case law makes it clear that this “life, meaning, and vitality” principle is only applicable in limited circumstances.

“[P]reambles describing the use of an invention generally do not limit the claims because the patentability of apparatus or composition claims depends on the claimed structure, not on the use or purpose of that structure.” *Catalina*, 289 F.3d at 809 (citing *In re Gardiner*, 171 F.2d 313, 315–16 (1948)). “[S]tatements of intended use or asserted benefits in the preamble may, in rare instances, limit apparatus claims, but only if the applicant clearly and unmistakably relied on those uses or benefits to distinguish prior art.” *Catalina*, 289 F.3d at 809.

“[C]lear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art transforms the preamble into a claim limitation because such reliance indicates use of the preamble to define, in part, the claimed invention.” *Id.* at 808. “Without such reliance, however, a preamble generally is not limiting when the claim body describes a structurally complete invention such that deletion of the preamble phrase does not affect the structure or steps of the claimed invention.” *Id.* at 809 (citing *IMS Tech., Inc. v. Haas Automation, Inc.*, 206 F.3d 1422, 1434 (Fed. Cir. 2000) (preamble phrase “control apparatus” does not limit claim scope where it merely gives a name to the structurally complete invention)). “Thus, preamble language merely extolling benefits or features of the claimed

invention does not limit the claim scope without clear reliance on those benefits or features as patentably significant.” *Id.* (citing *STX, LLC v. Brine, Inc.*, 211 F.3d 588, 591 (Fed. Cir. 2000) (preamble stating that invention provides “improved playing and handling characteristics” is not a limitation).

Here, the preamble is not limiting. The preamble merely states “[a] sun shade assembly comprising.” It does not breathe life, meaning, and vitality into the claim. Instead, by stating “sun shade,” the preamble merely states a purpose or an intended use for the invention. *Cf. Bio-Rad*, 967 F.3d at 1369; *Catalina*, 289 F.3d at 809. The specification confirms that the preamble merely sets forth an intended use—the Reissue Patent states “[i]n some embodiments, the presently disclosed subject matter is directed to a sun shade assembly (*e.g., an assembly that provides shade from the sun*).” Reissue Patent at 1:60–62 (emphasis added). The word “assembly” is simply a placeholder, like “apparatus,” that does nothing to limit or define the subject matter to be claimed.

The claim body defines a structurally complete invention, including a mast, at least one rib, and a sail, such that deletion of the preamble phrase does not affect the structure of the claimed invention. *Cf. Catalina*, 289 F.3d at 809. The term “sun shade” provides no antecedent basis for any limitation in the body of the claim. Moreover, Patent Owner never relied upon the preamble during prosecution to distinguish prior art. Patent Owner also never “clearly and unmistakably relied” on

the intended use as a sun shade device to distinguish prior art in the prosecution history, making it inappropriate for this intended use to limit the claim. *Cf. Bio-Rad*, 967 F.3d at 1369; *Catalina*, 289 F.3d at 809.

Thus, the preamble of claim 44 is not limiting.

C. “sun shade assembly”

If the preamble is found to be limiting and requires construction, then “sun shade assembly” should be construed to mean “an assembly that provides shade from the sun.”

This interpretation flows from its plain meaning. The term simply provides a functional modifier in conjunction with the word assembly, making it clear that this term covers an “assembly that provides shade from the sun.”

This interpretation is consistent with, and perhaps even more narrow than, the specification. In this regard, the Reissue Patent states “[i]n some embodiments, the presently disclosed subject matter is directed to a sun shade assembly (e.g., an assembly that provides shade from the sun).” Reissue Patent at 1:60–62. Even if this does not rise to the level of a definition, this statement makes it clear that the Patent Owner intended to use the term “sun shade assembly” to cover at least any assembly that provides shade from the sun. (The use of the term “e.g.” rather than “i.e.” suggests that the term was intended to be applied broadly such that a sun shade

assembly could potentially cover even more than just an assembly that provides shade from the sun although that additional scope is undefined.)

The term “**sun shade assembly**” means any “**assembly that provides shade from the sun.**”

D. “anchor”

Patent Owner acted as its own lexicographer, providing a definition for the term “anchor” as follows: “The term ‘anchor’ broadly refers to any element that provides weight and/or a mechanism by which to secure assembly 5 into a support surface (e.g., sand).” Reissue Patent at 8:49–51.

To act as its own lexicographer, a patentee must ‘clearly set forth a definition of the disputed claim term’ other than its plain and ordinary meaning.” *Thorner v. Sony Comput. Ent. Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (quoting *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002)). Here, the proffered definition, while not inconsistent with the plain meaning, shows that anchor is something by which the mast is “secured” relative to the supporting surface. It is evident that “securing” the assembly into a support surface requires a mechanism that prevents rotation of the mast relative to the support surface. The Reissue Patent surrounds the term anchor in quotation marks, which is “often a strong indication that what follows is a definition.” *Sinorgchem Co., Shandong v. Int’l Trade Comm’n*, 511 F.3d 1132, 1136 (Fed. Cir. 2007).

Consequently, the term “**anchor**” should be construed to mean “**any element that provides weight and/or a mechanism by which to secure assembly into a support surface.**”

E. “cap”

The term “cap” does not appear in the specification of the Reissue Patent other than when it is used as part of the term “pivot cap.” As the term “cap” in claim 45 is only disclosed as a “pivot cap,” and claim terms must be construed in light of the specification, Petitioner believes the term cap should be construed as a “pivot cap” that rotates relative to the mast.

Petitioner recognizes that Patent Owner may argue that “cap” should not be limited to a pivot cap since Patent Owner was attempting to obtain broader coverage in the Reissue Patent than it obtained in the Original Patent. In this case, Patent Owner might argue that the term “**cap**” should be construed to mean “**an overlaying or covering structure.**” Ex. 1032. <https://www.merriam-webster.com/dictionary/cap>. Petitioner is willing, for purposes of this PGR Petition only, to proceed under this broader interpretation.

VI. PERSON OF ORDINARY SKILL IN THE ART

A person having ordinary skill in the art at the time of the claimed invention in the Reissue Patent would be someone familiar with product design and development principles relating to beach and leisure equipment. This could be

obtained in the form of a bachelor's or advanced degree in industrial design, two or more years of experience designing consumer products in this or related fields, or a particular interest or experience in the problems encountered in this field and efforts to remedy them. An industrial designer is typically trained as a generalist (industry agnostic), but as a specialist in the process of product design and development.

VII. RELIEF REQUESTED AND THE REASONS FOR THE REQUESTED RELIEF

Petitioner asks that the Board institute a trial and cancel the challenged claims as unpatentable in view of the analysis below.

VIII. GROUNDS

A. Summary of Grounds:

The Challenged Claims are invalid based on at least five different grounds.

The Petition relies upon the following references:

- U.S. Pat. Publ. No. 2013/0019794 to Neal (“Neal”) (Ex. 1012);
- German Reference (Ex. 1013);
- Saiz (Ex. 1015); and
- Barnes (Ex. 1016).

The grounds alleged in the Petition are:

<u>Ground</u>	<u>Basis</u>	<u>References (if Any)</u>	<u>Claims</u>
I	Novelty (§ 102)	Neal	44, 45, 47

<u>Ground</u>	<u>Basis</u>	<u>References (if Any)</u>	<u>Claims</u>
II	Novelty (§ 102)	German Reference	44, 45, 47
III	Obviousness (§ 103)	Saiz + Barnes	44, 45, 47
IV	Lack of Written Description Support (§ 112)	N/A	44, 45, 47
V	Enablement (§ 112)	N/A	44, 45, 47

B. Ground I:

Claims 44, 45, and 47 are invalid pursuant to 35 U.S.C. § 102 as anticipated by Neal.

C. Ground II:

Claims 44, 45, and 47 are invalid pursuant to 35 U.S.C. § 102 as anticipated by the German Reference.

D. Ground III:

Claims 44, 45, and 47 are invalid pursuant to 35 U.S.C. § 103 as being unpatentable over Saiz in view of Barnes.

E. Ground IV:

Claims 44, 45, and 47 are invalid pursuant to 35 U.S.C. § 112 as lacking written description support.

F. Ground V:

Claims 44, 45, and 47 are invalid pursuant to 35 U.S.C. § 112 as failing to meet the enablement requirement.

IX. OVERVIEW OF THE REFERENCES

The various references relied upon in the Petition are summarized as follows:

A. Neal (Ex. 1012)

Neal is a printed publication that was published on January 24, 2013. Even assuming Patent Owner is entitled to claim priority back to the filing date of the Provisional Application, the earliest possible priority date for the Reissue Patent would be August 28, 2019.² Consequently, Neal constitutes prior art to the Reissue Patent.

Neal relates to a universal holder. Neal at ¶ [0023]. The universal holder is shown in isolation in Figures 1–2, which respectively show the universal holder in fully assembled and disassembled states. The universal holder has an upper pipe or tube 2 with an open end 3. Neal at ¶ [0023]. “The bottom end of the stainless steel pipe can receive a point or a pointed spike 4.” Neal at ¶ [0024]. The point or spike 4 may be used for insertion into soil or sand. Neal at ¶ [0009].

² Petitioner does not concede that Patent Owner is entitled to this earliest possible priority date for its patent, but it is unnecessary to resolve that question for purposes of this Petition.

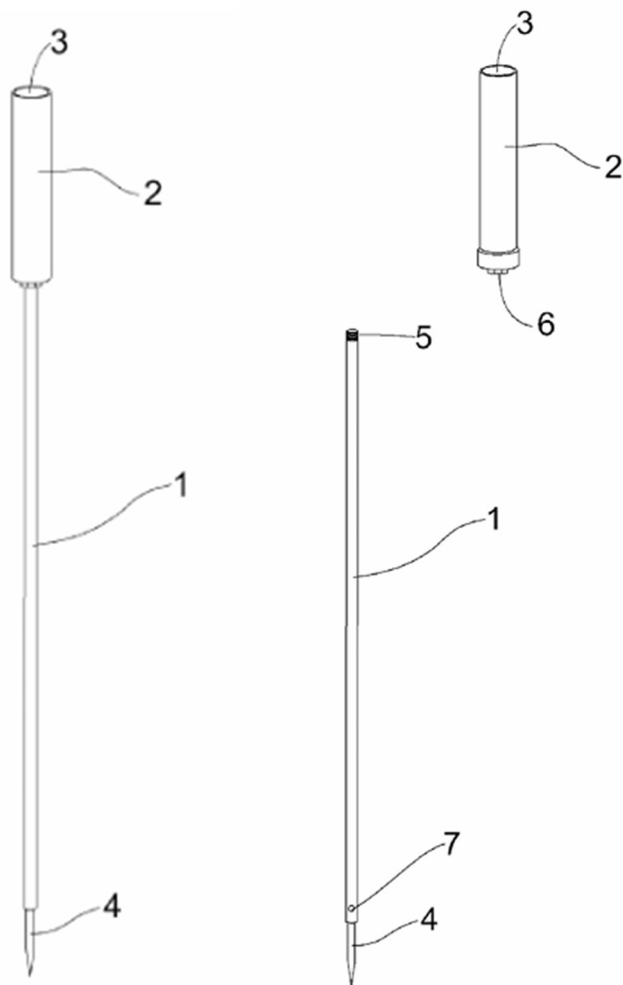
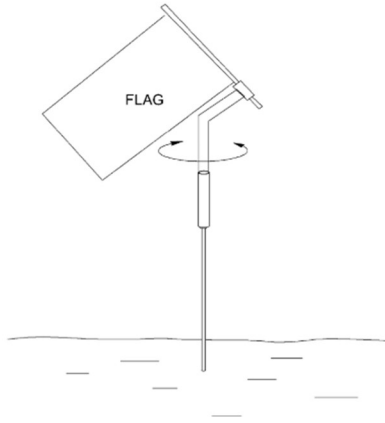


FIG. 1

FIG. 2

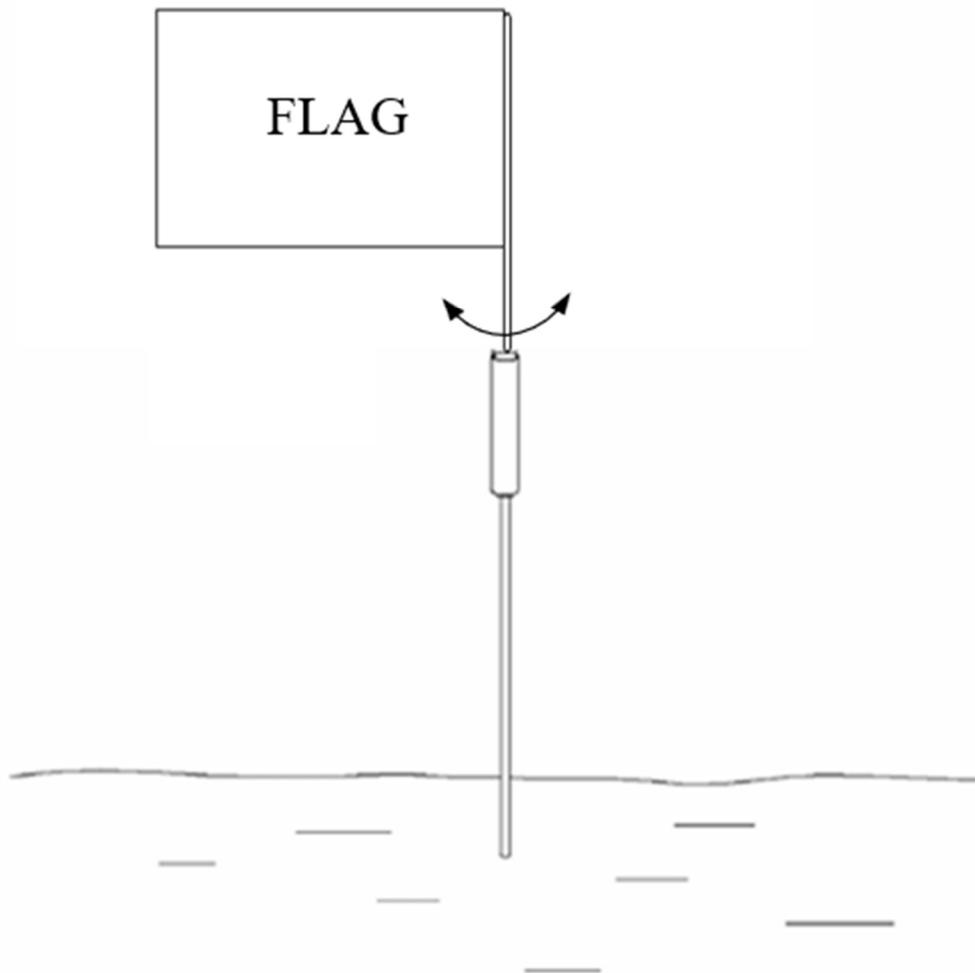
Neal notes that the universal holder can be used to hold a variety of devices. The embodiment described with reference to FIG. 5 of Neal is particularly relevant here. FIG. 5 is reproduced below:

**FIG. 5**

Neal states:

The special flag pole accessory shown in FIG. 5 can be conveniently made from sections of PVC pipe or other material. It can be designed as shown in FIG. 5 to hold the flag at an angle. **This allows the flag to turn in the wind.** A lower section of tube or rod has an angle of around 45 degrees and thus points upward at an angle when its lower end is inserted into the universal holder. A flag attachment section is attached to the upper end of the tube or rod as a second tube or rod at around 90 degrees as shown in FIG. 5. This upper tube or rod can hold a flag by tying the flag to it, having rings or otherwise allowing a flag to be attached to it. The flag flies at an angle and the entire assembly can turn freely in the wind since the lower section of tube or rod loosely fits into the upper tube of the universal holder.

Par. [0028] (emphasis added). The same paragraph describes an alternative embodiment where “a straight vertical flagpole can also be held by the present invention.” This alternative embodiment would look something like the image below.



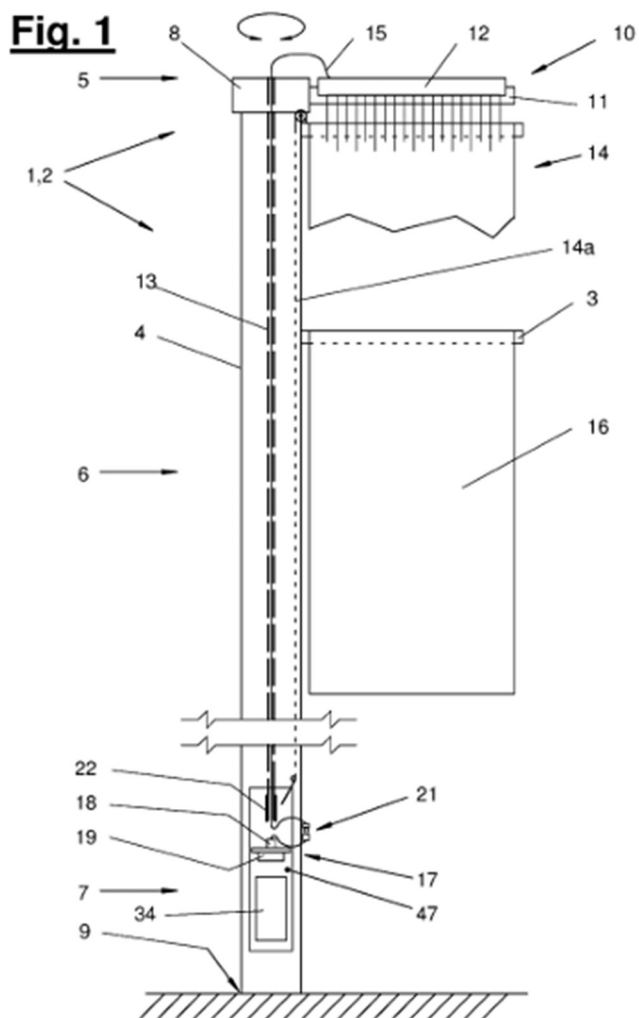
B. German Reference (Ex. 1013, 1014)

This original version of the German Reference (Ex. 1013) is provided entirely in German, but a certified translation of this reference is also submitted herewith (Ex. 1014). The German Reference is a printed publication that was published on October

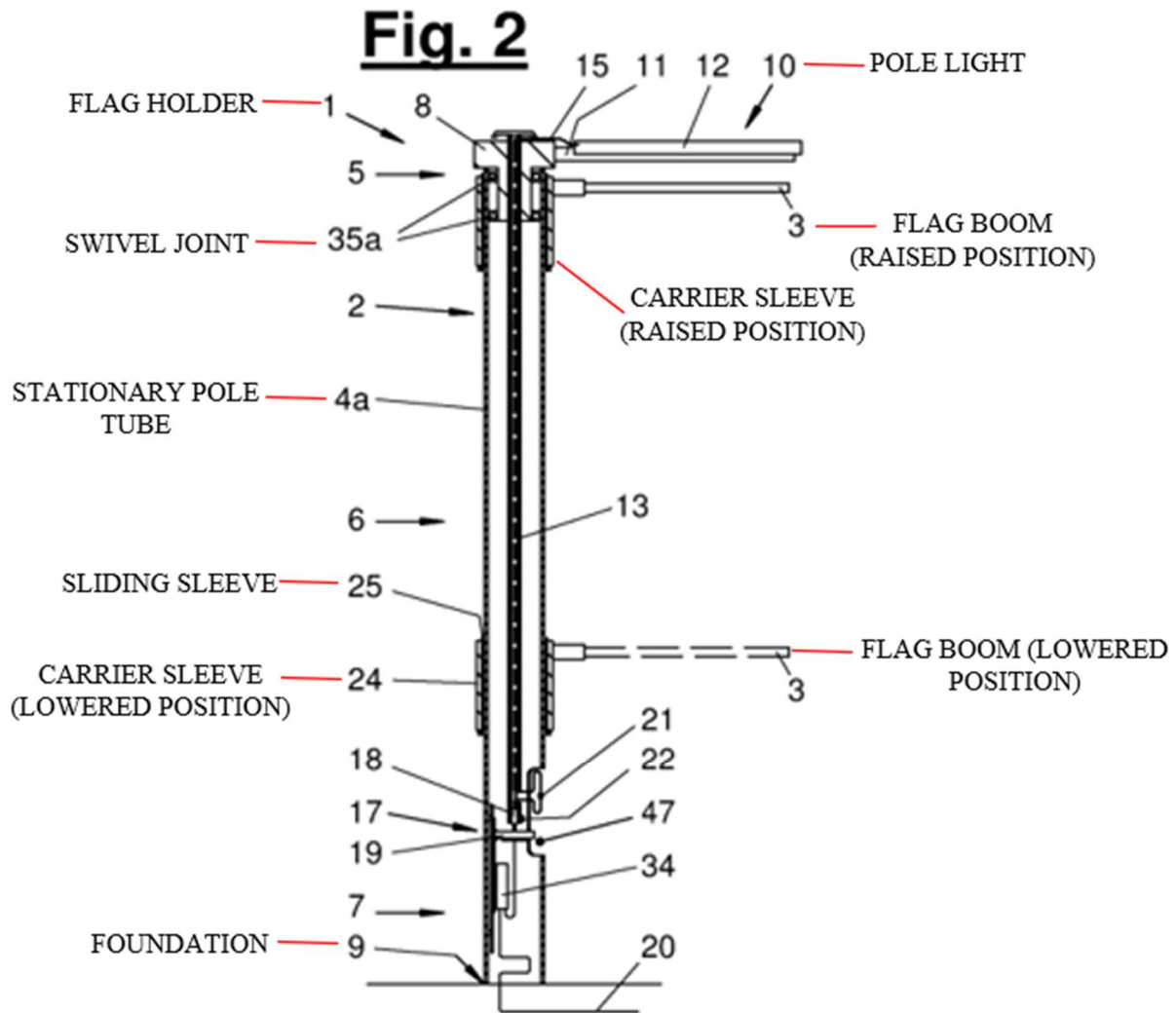
12, 2015. Even assuming Patent Owner is entitled to its earliest possible priority date of August 28, 2019, the German Reference was published several years before. Consequently, the German Reference constitutes prior art to the Reissue Patent.

Figure 1 of the German Reference shows some relevant features of the device. A pole 1 has a base region 7 at its lower end. Ex. 1014 at ¶ [0031]. The base region is “fixed immovably and, if necessary, detachably to a foundation (9) or a ground mount.” Ex. 1014 at ¶ [0031]. “A support body (8) arranged in the head region (5) of the pole (1) from Fig. 1.” Ex. 1014 at ¶ [0033]. The support body (8) can be fastened to the pole head via any pivot bearing. “[A] lighting means holder (11) is fastened to the support body (8) and in turn holds one or more lighting means (12).”

“Arranged on the pole (1) is a flag (16) which via a hoisting device (14) can be raised and lowered.” Ex. 1014 at ¶ [0035]. “The flag holder (3) is preferably axially displaceable and rotatable mounted on the pole (1).” Ex. 1014 at ¶ [0035] (emphasis added).



One relevant embodiment of the German Reference is shown in Figure 2, an annotated version of which is shown below:



This figure “shows a second variant of a flagpole (1) with a power supply device (2) in cross-section.” Ex. 1014 at ¶ [0045]. Paragraph [0045] of the translated German Reference states that a “sliding sleeve (25) and the carrier sleeve (24) can be part of a hoisting device (14).” “On the outside of the pole, a sliding sleeve (25) is guided on which a carrier sleeve (24) with a flag boom (3) is placed.” Ex. 1014 at ¶ [0045]. “The sliding sleeve (25) can be raised or lowered using a hoisting cable (not shown)” and “is preferably mounted rotationally fixed and axially displaceable

on the stationary pole tube (4a).” Ex. 1014 at ¶ [0045]. However, importantly, “[t]he carrier sleeve (24) is entrained by the sliding sleeve (25) and is rotatably mounted thereon so that the flag boom (3) with a flag can rotate freely in the wind around the stationary pole tube (4a).” Ex. 1014 at ¶ [0045].

Fig. 3 shows another alternative embodiment. Ex. 1014 at ¶ [0048]. This embodiment includes a stationary pole base (7) and a rotatable pole tube (4b) which is mounted via swivel joint (35b) to the pole base (7). Ex. 1014 at ¶ [0048].

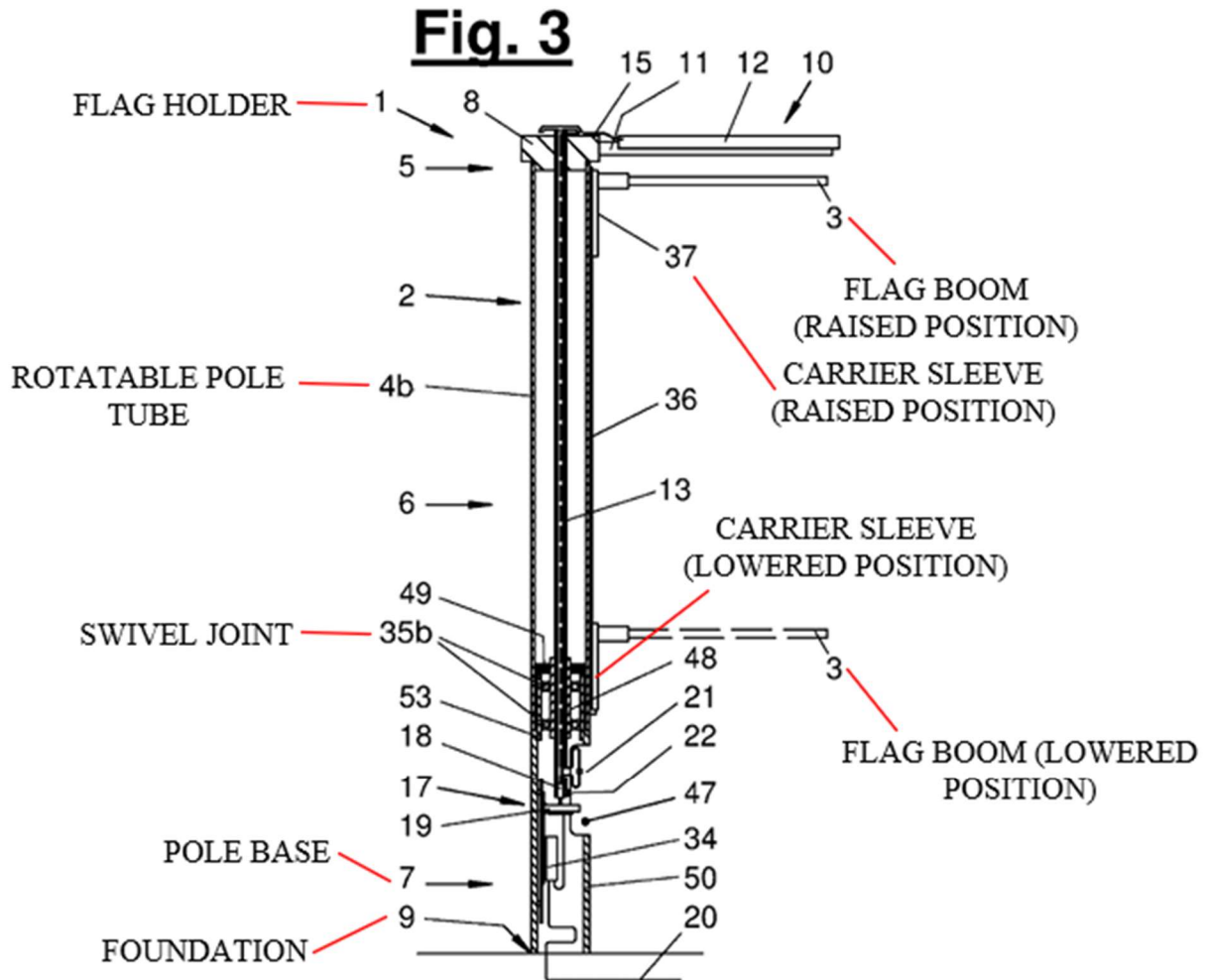
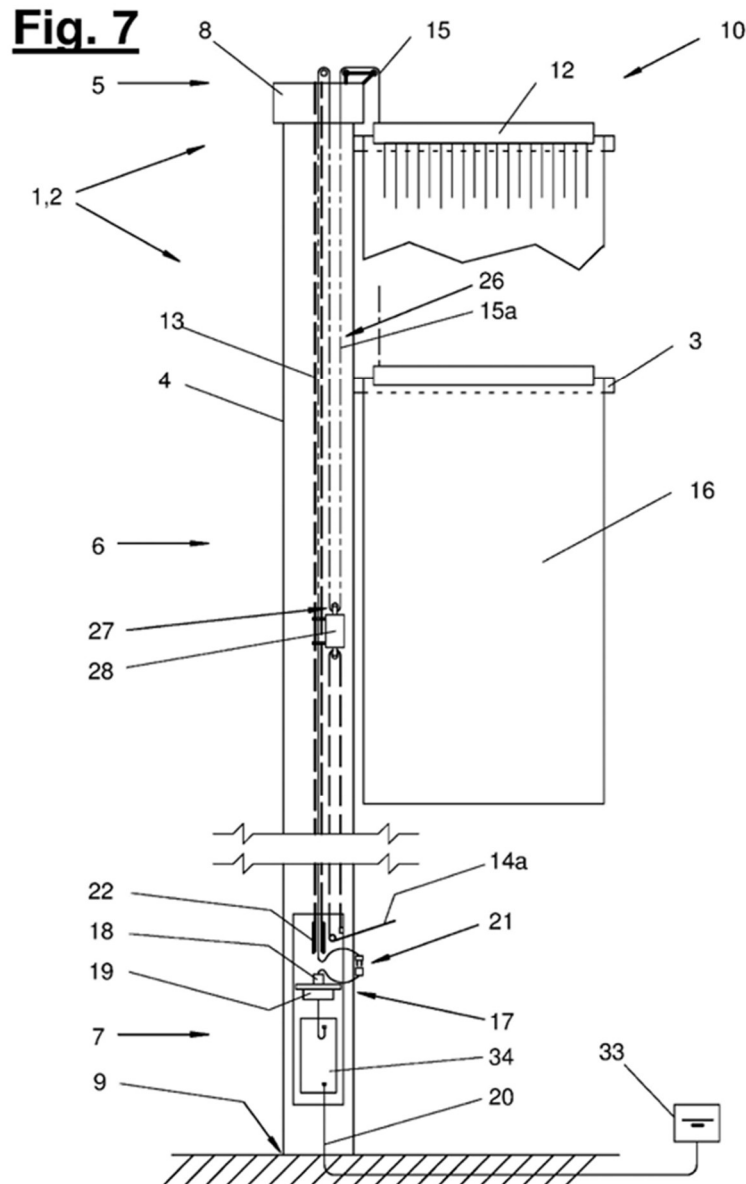


Fig. 7 shows a flag positioned on the flag boom 3.



C. Saiz (Ex. 1015)

Saiz is a printed publication that was published on August 21, 2008. Even assuming Patent Owner is entitled to claim priority back to the filing date of the Provisional Application, the earliest possible priority date for the Reissue Patent

would be August 28, 2019. Consequently, Saiz constitutes prior art to the Reissue Patent.

Saiz is entitled “Aerodynamic Sunshade” and the abstract states “[t]he present invention is an aerodynamic sunshade” FIG. 1 shows one sunshade discussed in Saiz. Saiz describes a central arm 2 of a support stem 1 which serves as a mast. Saiz at ¶ [0032].

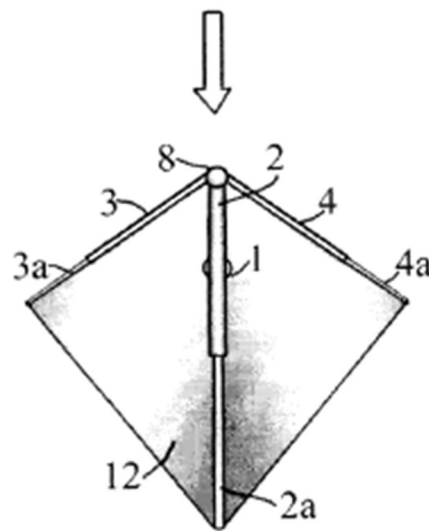


FIG. 1

The embodiment of FIG. 1 illustrates lateral arms 3 and 4 located proximate the top end of the support stem 1. Telescoping extending arms 3a, 4a are also attached to the lateral arms 3 and 4, and the cloth 12 is attached to these arms 3, 3a, 4, 4a as shown in the top view of FIG. 1. In Saiz, the lateral arms 3 and 4 are attached to the spindle 8, and the spindle 8 allows rotation of the cloth 12 relative to the lower portion of the support stem 1. Saiz at ¶ [0032]. Saiz states that the cloth (12) “is

extended like a fan, taking on the form of a kite” and that it indicates its direction in respect of the wind arrow.” Saiz at ¶ [0032].

Saiz discloses a “stem or mast, which is embedded either in the sand, in a concrete base or a handle” Saiz at ¶ [0004]. Saiz notes that “[t]he stem is made up of two telescopic sections connected by dovetailing and sliding in relation to each other, both on a longitudinal and a rotational basis” Saiz at ¶ [0008]. The telescoping sections are able to rotate relative to each other due “to the fact that the stem is connected to an eccentric point, [which] means that the extended cloth of the shade acts as a weather vane under the action of the wind, which makes it very stable and prevents it from being blown away in the event of strong winds.” Saiz at ¶ [0008]. The telescoping sections are shown in FIG. 13 at locations where reference numbers 1 and 1a are shown.

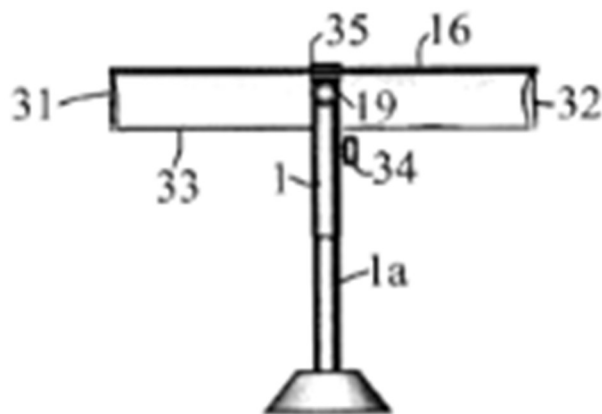


FIG. 13

Discussing the telescoping sections, Saiz also notes that, “[i]f so wished, rotation can be eliminated by means of exerting pressure on the inner section with a screw anchored to the outer section or else with a brake.” Saiz at ¶ [0008]. This is illustrated in FIG. 13, with this figure showing “a knob of fixation with screw (34).”

Saiz also states in its section regarding the prior art that “[c]urrent sunshades are not efficient and stable when the wind blows through not being aerodynamic or self-directional and not having the anchor point advanced in relation to the centre of application of resistance and through this being high.” Saiz at ¶ [0003]. Saiz describes advantages of its invention and states that it is “stable in the face of wind” as it “is self-directional and offers little resistance.” Saiz at ¶ [0014].

Additionally, FIG. 3 of Saiz shows a side view where the rod 1a extends into the support surface to secure the assembly.

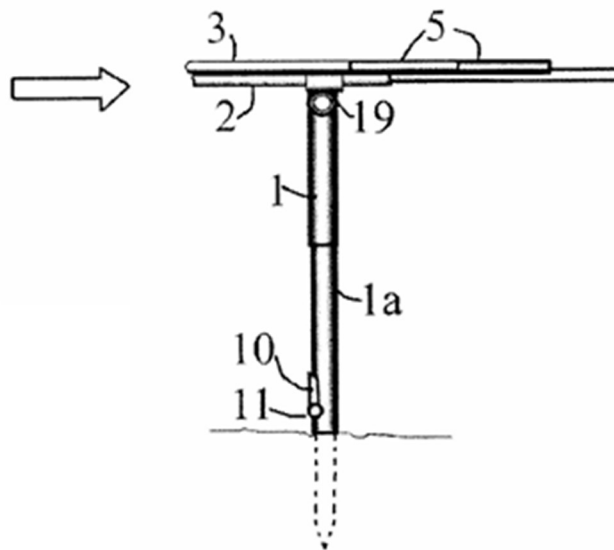


FIG. 3

Additionally, Saiz notes that the stem or mast is embedded either in the sand or “in a concrete base.” Saiz at ¶ [0004].

Saiz was the primary reference relied upon by the U.S. patent examiner during prosecution of the Reissue Patent. In the examiner’s statement of reasons for allowance, the examiner discussed application Claim 47, which became Claim 44 in the Reissue Patent after the claims were renumbered for issuance. In his notice of allowance, the examiner stated the closest prior art was Saiz, and the examiner distinguished the claim from Saiz by stating that “Saiz does teach rotation, *but this rotation is effected by the mast, and not relative to the mast.*” Ex. 1004 at 18.

D. Barnes (Ex. 1016)

Barnes is a U.S. patent that was filed on Aug. 12, 2017, based on a provisional application filed October 18, 2016. Barnes issued on January 29, 2019. Even assuming Patent Owner is entitled to claim priority back to the filing date of the Provisional Application, the earliest possible priority date for the Reissue Patent would be August 28, 2019. Consequently, Barnes constitutes prior art to the Reissue Patent.

Barnes discloses “[a] system for providing shade onto a surface” Barnes at Abstract. This system 10 is shown in FIG. 1 of Barnes below, with the system 10 “providing shade 1 onto a surface 2.” Barnes at 3:64–65.

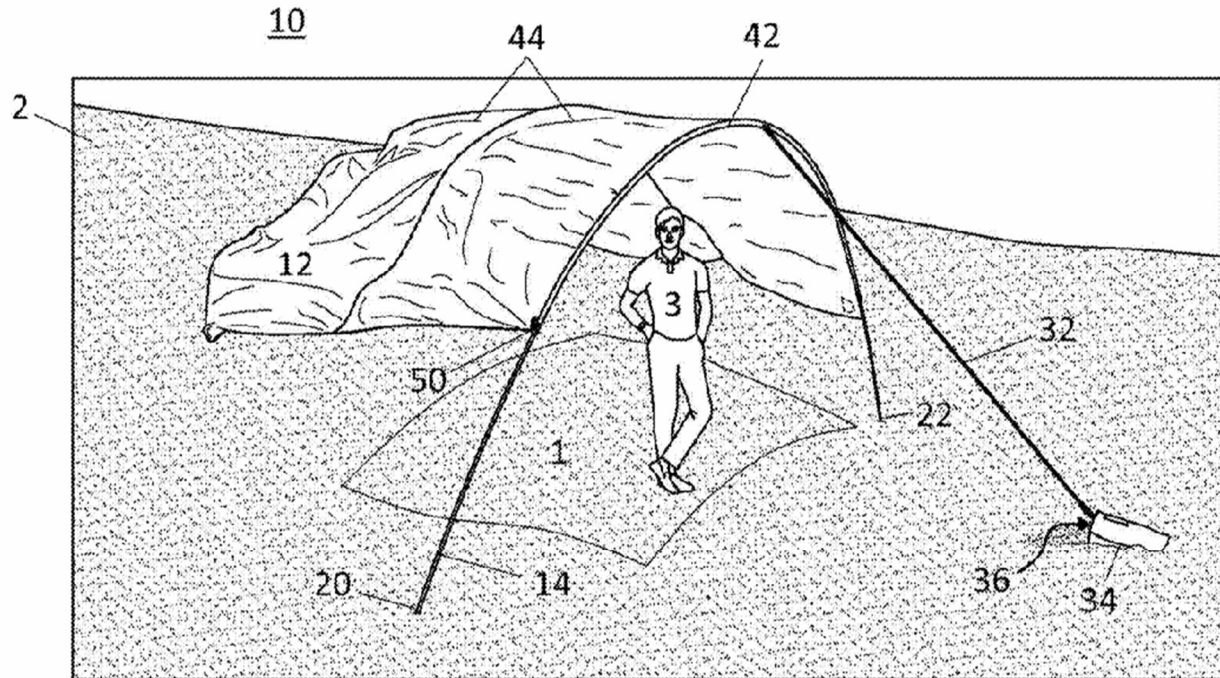


FIG. 1

The embodiment shown in FIG. 1 of Barnes discloses that the “canopy 12 may define a suspension end 42 positioned proximal to the frame 14 when the canopy 12 is engaged with the frame 14.” Barnes at 4:7–9. As shown in FIG. 1 of Barnes, nothing is present from the proximal edge to the unrestrained free edge to restrain the canopy 12 of Barnes, and Barnes frequently notes that the canopy is aeri- ally suspended. Barnes at Abstract, 1:53–55, 1:62–63; 7:45–48; claim 1; claim 11.

The canopy 12 defines a loop 40 configured to accept a portion of the frame 14 through the loop 40. Barnes at 4:15–18. (As shown below, the loop 40 is depicted in FIG. 4 of Barnes, and the frame 14 is depicted in FIG. 1 of Barnes).

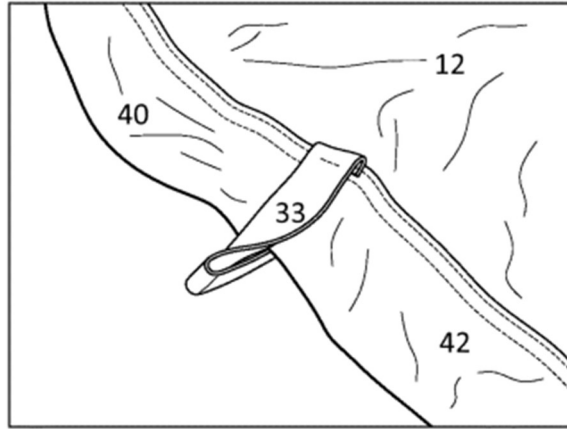


FIG. 4

Barnes also describes other issues with existing prior art, stating, in its background section, that “[s]ome systems include rigid canopy susceptible to being shifted or unanchored by wind.” Barnes at 1:25–27. Barnes notes that “there remains a need for systems and methods including flexible canopy structures capable of being at least partially supported by wind and configured for easy [] transport and assembly.” Barnes at 1:31–34.

Barnes also states that “[o]ther systems are cumbersome to transport or assemble, due to the number of parts involved, steps required during setup and/or low shade to weight ratios.” Barnes at 1:25–30. Barnes touts the lightweight materials that are used in the canopy 12. Barnes at 3:67–4:6 (“The canopy 12 may include one or more lightweight materials”). It also notes that “[t]he canopy 12

may be unitarily constructed or may include a plurality of coupled sections 44 and/or selectively engageable sections 44.” Barnes at 4: 4-6.

Barnes also expresses a desire to at least partially support flexible canopy structure using the wind. Barnes at 1:31–34. Barnes accomplishes this by providing a canopy 12 without any supporting rods or arms from the suspension end 42 (i.e., the proximal edge) to the unrestrained free edge.

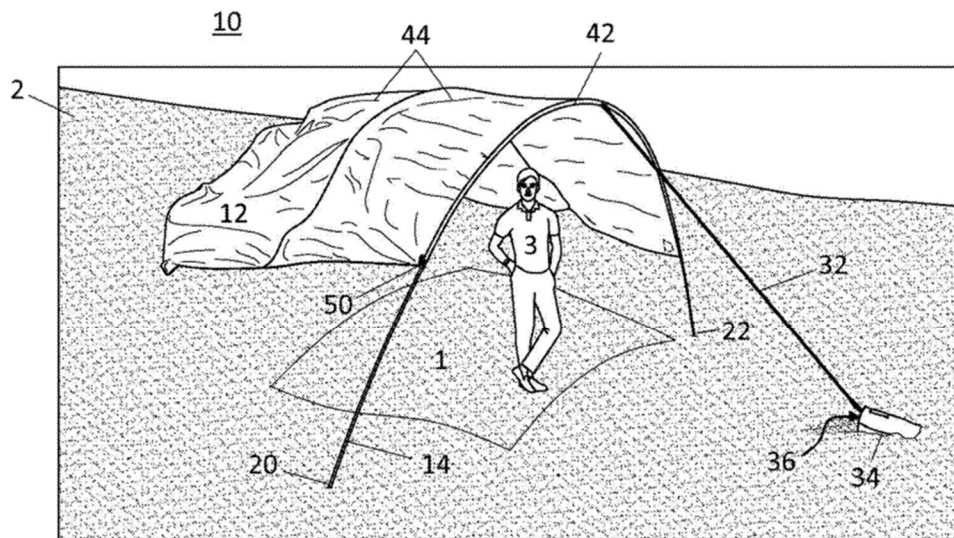


FIG. 1

Barnes was not cited or applied by the patent examiner during prosecution of the Original Patent or the Reissue Patent. Accordingly, the patent examiner did not have this reference available to him as he evaluated the application resulting in the Reissue Patent.

X. IDENTIFICATION OF HOW THE CLAIMS ARE UNPATENTABLE

The specific Grounds raised in the Petition will now be addressed in further detail.

A. Ground I: Claims 44, 45, and 47 are anticipated by Neal

Claims 44, 45, and 47 of the Reissue Patent are anticipated (i.e., lacks novelty) under 35 U.S.C. § 102 based on U.S. Pat. Publ. No. 2013/0019794 to Neal.³

i. Claim 44

As shown in the discussion below, each element of claim 44 is present in Neal.

1. Claim 44(a): A sun shade assembly comprising:

As noted above in Section V(B), the preamble is not limiting. Even if consideration of the preamble is appropriate, the flag of FIG. 5 in Neal provides shade from the sun, making it a sun shade assembly. Melamed Decl. at ¶ 106.

³ Neal and the German reference were cited by the EPO examiner in rejecting claim 4 of corresponding EP Pat. App. No. 4,585,774 based on a lack of novelty. Claim 4 is verbatim of claim 44 of the Reissue Patent. (Ex. 1011). While the EPO examiner's analysis is helpful, the analysis in this petition is derived independently under U.S. law.

2. *Claim 44(b): A mast configured to extend upwardly from a supporting surface, and having a top end and a bottom end*

FIG. 5 of Neal shows a mast extending upwardly from a supporting surface, and having a top end and a bottom end as shown in the annotated image below.

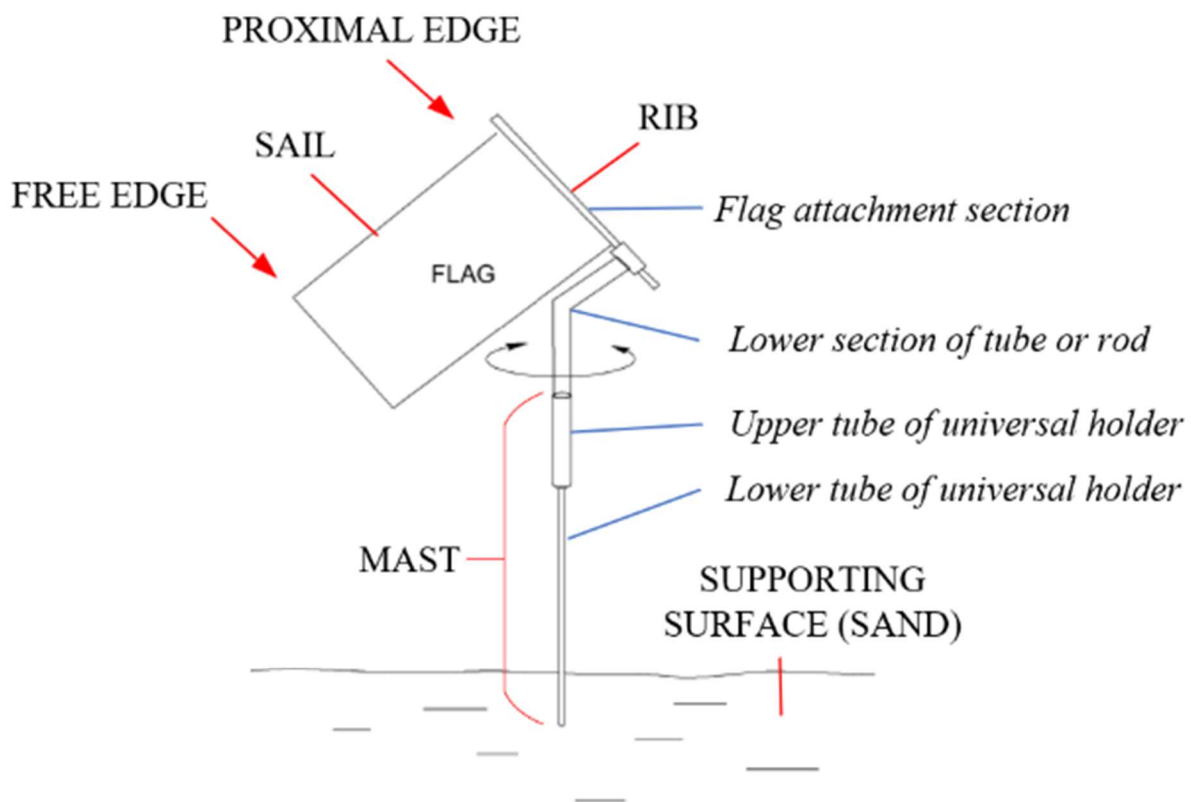


FIG. 5

Melamed Decl. at ¶ 107. Neal thus discloses “[a] mast configured to extend upwardly from a supporting surface, and having a top end and a bottom end.”

Melamed Decl. at ¶ 107. The “mast” of Neal may alternatively be considered just the lower and upper tubes of the universal holder, or these two components plus the lower section of tube or rod. Melamed Decl. at ¶ 107.

3. *Claim 44(c): At least one rib located proximate the top end of said mast, and configured to rotate relative to the supporting surface;*

FIG. 5 shows a rib located proximate the top end of the mast that is configured to rotate relative to the supporting surface as shown in the annotated image below (see the arrows just below the flag):

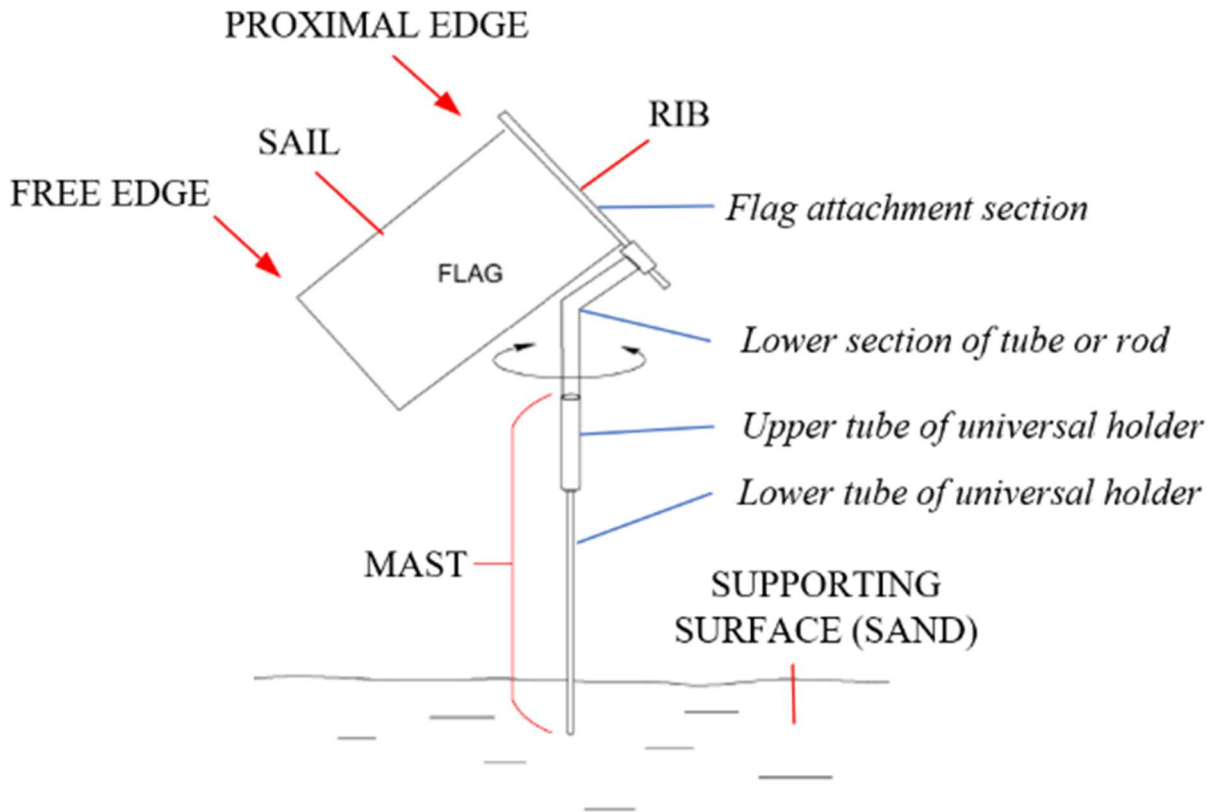


FIG. 5

Melamed Decl. at ¶ 108. The rotatability is disclosed in Paragraph [0028] of Neal, which states:

The special flag pole accessory shown in FIG. 5 can be conveniently made from sections of PVC pipe or other material. It can be designed as shown in FIG. 5 to hold the flag at an angle. This allows the flag to turn in the wind. . . . The flag flies at an angle and the entire assembly can turn freely in the wind since the lower section of tube or rod loosely fits into the upper tube of the universal holder.

(emphasis added); Melamed Decl. at ¶ 109.

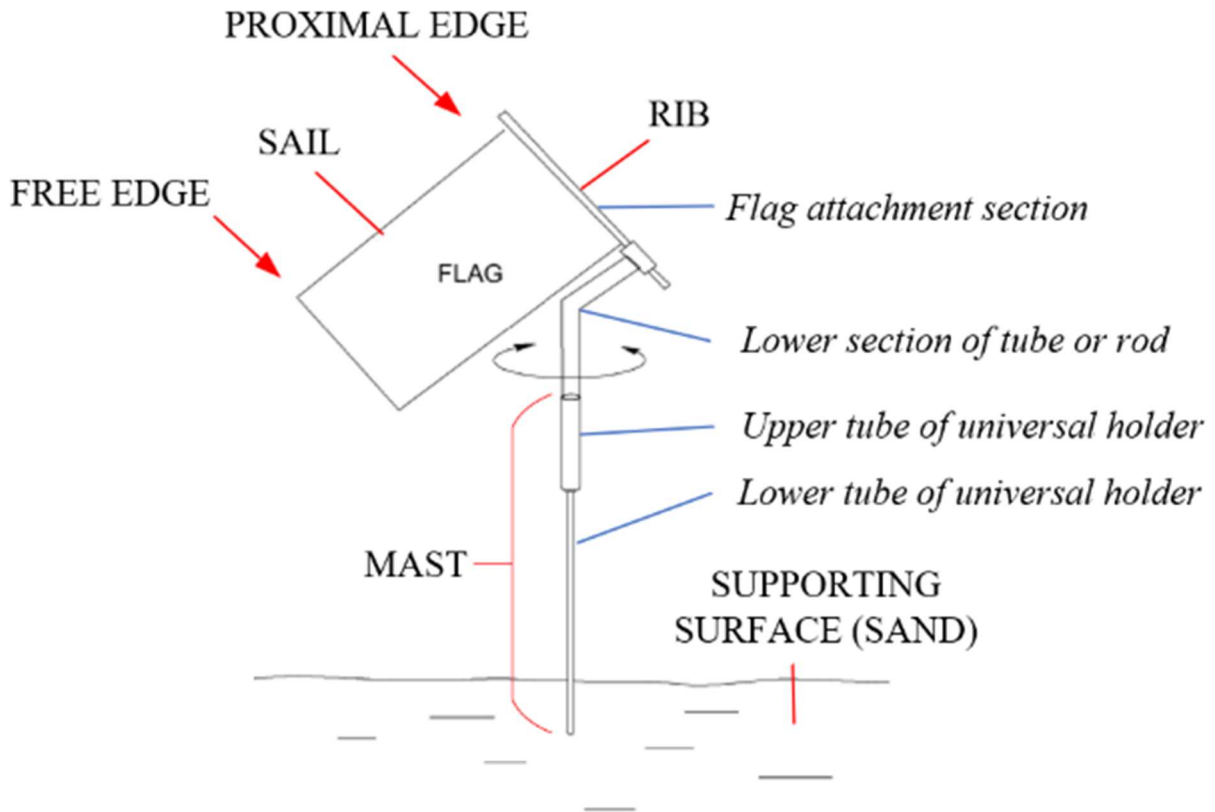
Paragraph [0028] also describes an alternative embodiment stating that “a straight vertical flagpole can also be held by the present invention.” In this embodiment, the rib identified above would be inserted directly into the upper tube of the universal holder, allowing the rib to rotate relative to the mast and relative to the supporting surface. Melamed Decl. at ¶ 110

Both embodiments described in Neal for the “flag pole accessory” meet this limitation of claim 44 regardless of whether a narrower or broader construction (discussed above) is applied. Melamed Decl. at ¶ 111.

Neal thus discloses “[a]t least one rib located proximate the top end of said mast, and configured to rotate relative to the supporting surface.” Melamed Decl. at ¶ 112.

4. *Claim 44(d): A sail having a proximal edge secured to said rib and an unrestrained free edge adapted to unfurl in response to the blowing of the wind, and wherein an entire surface area of said sail is unrestrained from the proximal edge to the free edge; and*

Fig. 5 of Neal shows these features as shown in the annotated version of that figure below.

**FIG. 5**

Melamed Decl. at ¶ 113. Notably, in the absence of any further limitations in claim 44 regarding what constitutes a “sail,” the flag of Neal is a “sail.” Melamed Decl. at ¶114.

Neal thus discloses “[a] sail having a proximal edge secured to said rib and an unrestrained free edge adapted to unfurl in response to the blowing of the wind, and wherein an entire surface area of said sail is unrestrained from the proximal edge to the free edge.” Melamed Decl. at ¶ 115.

5. *Claim 44(e): When unfurled, said sail and rib are adapted to rotate together to a direction of the blowing wind.*

Neal discloses that “[w]hen unfurled, said sail and rib are adapted to rotate together to a direction of the blowing wind.” Melamed Decl. at ¶ 116. This is readily apparent from the circular black arrow in FIG. 5 of Neal (which appears in the original figure). Melamed Decl. at ¶ 116.

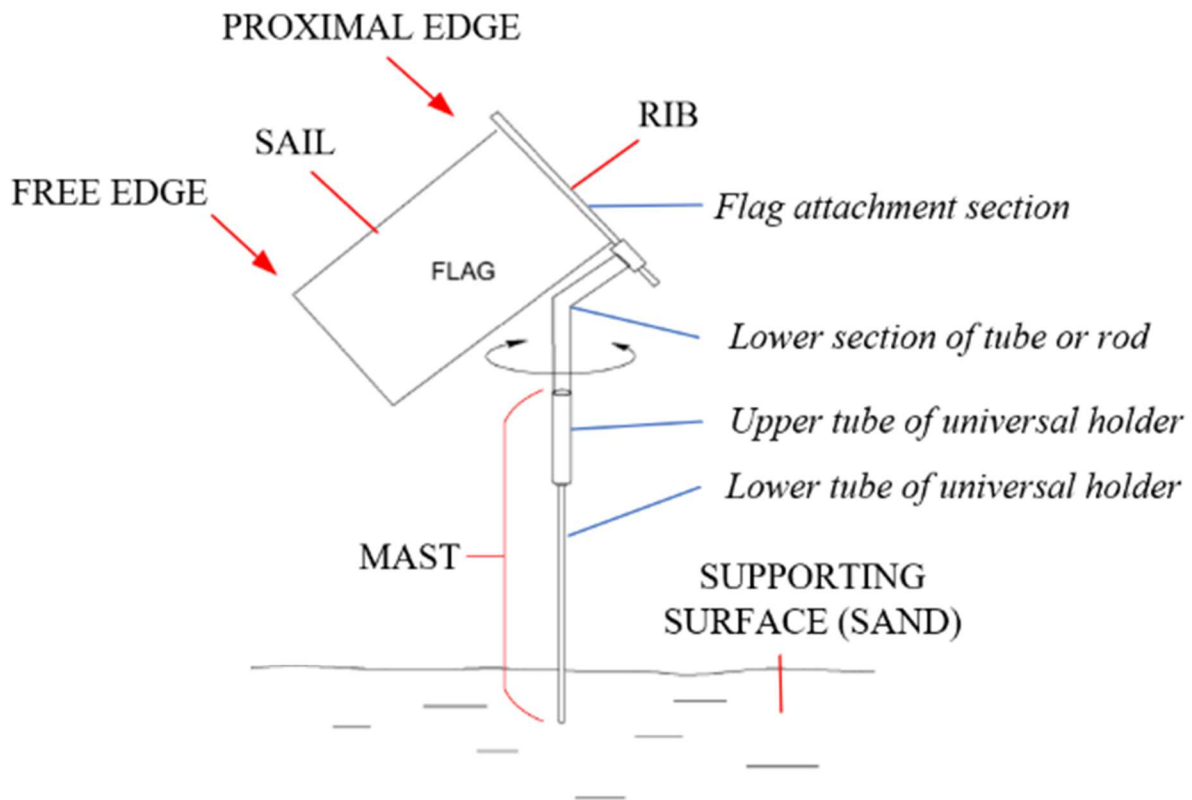


FIG. 5

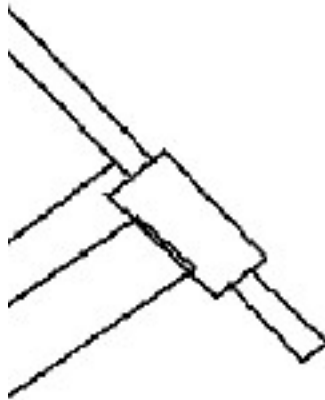
Melamed Decl. at ¶ 116. Paragraph [0028] of Neal states that the flag of FIG. 5 is allowed to turn in the wind and also states that “[t]he flag flies at an angle and the entire assembly can turn freely in the wind since the lower section of tube or rod loosely fits into the upper tube of the universal holder.” Melamed Decl. at ¶ 117.

Limitation 44(e) is thus also present in Neal. Melamed Decl. at ¶ 118.

Because each limitation of claim 44 is present in the single Neal reference, the claim is anticipated under 35 U.S.C. § 102. Melamed Decl. at ¶ 118.

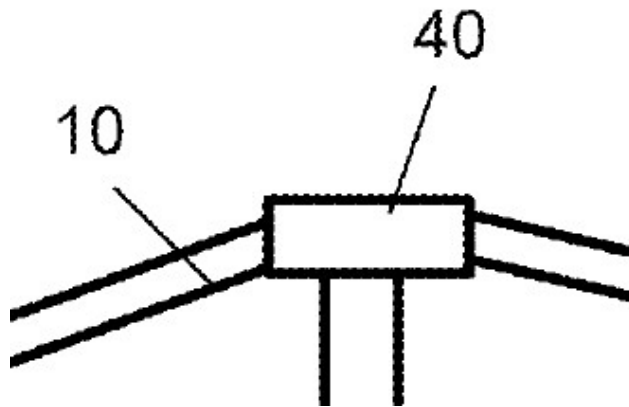
ii. Claim 45: The assembly of claim 44, wherein said at least one rib is attached to a cap located at the top end of said mast.

In Neal, the flag attachment section (rib) is attached to the “lower section of tube or rod” via a rectangular piece at the top of the “lower section of tube or rod.” Melamed Decl. at ¶ 119. As shown, a short length of the flag attachment section extends through this rectangular piece to the other side. Melamed Decl. at ¶ 119. This is illustrated in the enlarged view below:



If the mast in Neal is construed as the lower and upper tubes of the universal holder plus the lower section of tube or rod, then this rectangular piece constitutes a “cap located at the top end of said mast” as specified in claim 45. Melamed Decl. at ¶ 120.

Notably, such a “cap” is visually similar to the depiction of the pivot cap 40 in Fig. 3a of the Reissue Patent:



Melamed Decl. at ¶ 121.

If, in the alternative, the “mast” of Neal is considered to be just the lower and upper tubes of the universal holder, the limitations of claim 45 are still met by Neal. Melamed Decl. at ¶ 122. In this case, the “cap located at the top end of said mast” would be the combination of the rectangular piece discussed above and the lower section of tube or rod. Melamed Decl. at ¶ 122.

Neal thus also discloses the additional limitation of claim 45, namely a rib connected to a cap located at the top end of the mast. Melamed Decl. at ¶ 123. As such, claim 45 is anticipated under 35 U.S.C. § 102. Melamed Decl. at ¶ 123.

iii. Claim 47: The assembly of claim 44, and comprising an anchor located at the bottom end of said mast.

As discussed above, an anchor is properly construed as “comprising any element that provides weight and/or a mechanism by which to secure assembly into a support surface.” Neal also discloses this limitation.

In this regard, Neal discloses that “[t]he bottom end of the stainless steel pipe can receive a point or a pointed spike 4.” Neal at ¶ [0024]. The point or spike 4 may be used for insertion into soil or sand. Neal at ¶ [0009].

The spike 4 of Neal provides weight and also provides a mechanism by which to secure the assembly into a supporting surface such as sand. Melamed Decl. at ¶ 126. Because free rotation of the flag occurs above the pointed spike 4, very limited forces act at the pointed spike 4, and the lower portion of the mast would not rotate

during normal operating conditions. Melamed Decl. at ¶ 126. Accordingly, the point or spike 4 of Neal constitutes an anchor according to this limitation. Melamed Decl. at ¶ 126.

Neal thus also discloses the additional limitation of claim 47, namely an anchor located at the bottom end of said mast. Melamed Decl. at ¶ 124. As such, claim 47 is anticipated under 35 U.S.C. § 102. Melamed Decl. at ¶ 127.

B. Ground II: Claims 44, 45, and 47 are anticipated by the German Reference

Claims 44, 45, and 47 of the Reissue Patent are also anticipated (i.e., lacks novelty) under 35 U.S.C. § 102 based on the German Reference.

i. Claim 44

As shown in the discussion below, each element of claim 44 is present in the German Reference.

1. Claim 44(a): A sun shade assembly comprising:

As noted above in Section V(B), the preamble is not limiting. Even if consideration of the preamble is appropriate, the flag of FIGS. 2, 3, and 7 of the German Reference provides shade from the sun, making it a sun shade assembly. Melamed Decl. at ¶ 129.

2. *Claim 44(b): A mast configured to extend upwardly from a supporting surface, and having a top end and a bottom end*

In the German Reference, the stationary pole tube (4a) and the base region (7) of the pole (1) serve as the mast. Melamed Decl. at ¶ 130; *see also* Ex. 1014 at ¶ [0031]. The mast formed by these components rests on the foundation (9), which constitutes a supporting surface. Melamed Decl. at ¶ 130; *see also* Ex. 1014 at ¶ [0031]. The mast formed by these components has a top end and a bottom end. Melamed Decl. at ¶ 130.

The German Reference thus includes a “mast configured to extend upwardly from a supporting surface, and having a top end and a bottom end.” Melamed Decl. at ¶ 131; *see* Ex. 1014 at FIGS. 2, 3, and 7 of the German Reference.

3. *Claim 44(c): At least one rib located proximate the top end of said mast, and configured to rotate relative to the supporting surface;*

The German Reference includes a “flag boom (3),” which is also referred to as a “flag holder (3)” at times in the Certified Translation. Melamed Decl. at ¶ 132. The flag boom (3) constitutes a rib, and the flag boom (3) is located proximate the top end of the pole (1) in the annotated version of FIG. 2 shown below when in the raised position. Melamed Decl. at ¶ 132.

Regardless of whether “configured to” is construed as “capable of” or “specifically designed to,” the German Reference covers the “configured to rotate relative to the supporting surface” limitation. Melamed Decl. at ¶ 133. The German Reference states:

- “[t]he flag holder (3) is preferably axially displaceable and rotatable mounted on the pole (1).” Ex. 1014 at ¶ [0035].
- “The carrier sleeve (24) is entrained by the sliding sleeve (25) and is rotatably mounted thereon so that the flag boom (3) with a flag can rotate freely in the wind around the stationary pole tube (4a).” Ex. 1014 at ¶ [0045].

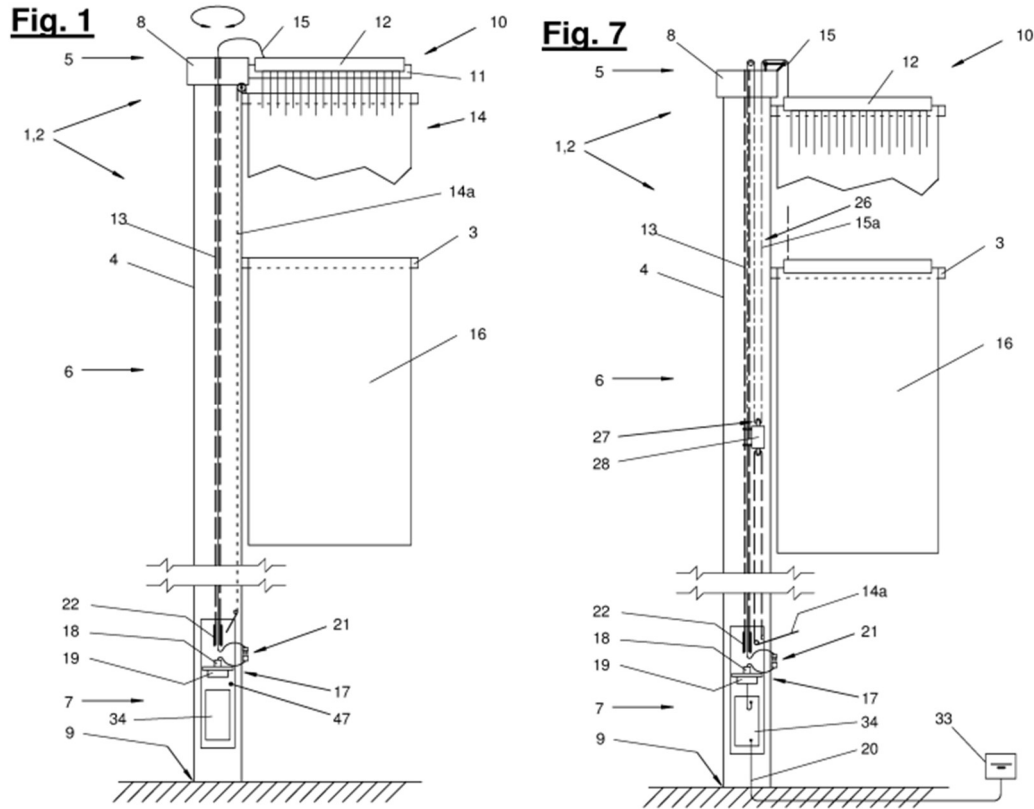
As such, the flag holder (3) is capable of rotating relative to the supporting surface (foundation 9) and the mast (stationary pole tube 4a), and it is specifically designed to rotate relative to the mast (stationary pole tube 4a). Melamed Decl. at ¶ 134.

The assembly of the German Reference thus includes “[a]t least one rib located proximate the top end of said mast, and configured to rotate relative to the supporting surface.” Melamed Decl. at ¶ 135.

4. *Claim 44(d): A sail having a proximal edge secured to said rib and an unrestrained free edge adapted to unfurl in response to the blowing of the wind, and wherein an entire surface area of said sail is unrestrained from the proximal edge to the free edge; and*

In the absence of any further limitations in claim 44 regarding what constitutes a “sail,” the flag of the German Reference is a “sail.” Melamed Decl. at ¶ 136. In the German Reference, the flag is allowed to simply hang down from the flag holder without a second flag holder at the bottom of the flag. Melamed Decl. at ¶ 136. The flag is not shown in FIG. 2 (likely to allow other components to be seen), but it is shown in FIGS. 1 and 7. Melamed Decl. at ¶ 136.

These figures show the flag in two different locations to illustrate that the flag boom (3) is capable of moving vertically. Melamed Decl. at ¶ 137. In FIGS. 1 and 7, the flag is shown with only a single flag holder. Melamed Decl. at ¶ 137. The flag has a proximal edge and an unrestrained free edge. Melamed Decl. at ¶ 137.



The figures shown above illustrate the flag (16) hanging down without any fasteners connecting the flag 16 to the pole tube (4). Melamed Decl. at ¶ 138.

The German Reference thus includes “[a] sail having a proximal edge secured to said rib and an unrestrained free edge adapted to unfurl in response to the blowing of the wind, and wherein an entire surface area of said sail is unrestrained from the proximal edge to the free edge.” Melamed Decl. at ¶ 139.

5. *Claim 44(e): When unfurled, said sail and rib are adapted to rotate together to a direction of the blowing wind.*

The German Reference states “[t]he carrier sleeve (24) is entrained by the sliding sleeve (25) and is rotatably mounted thereon so that the flag boom (3) with a flag can rotate freely in the wind around the stationary pole tube (4a).” Ex. 1014 at ¶ [0045]. The flag (sail) and the flag holder (rib) are both capable of and specifically designed to rotate together to a direction of the blowing wind. Melamed Decl. at ¶ 140.

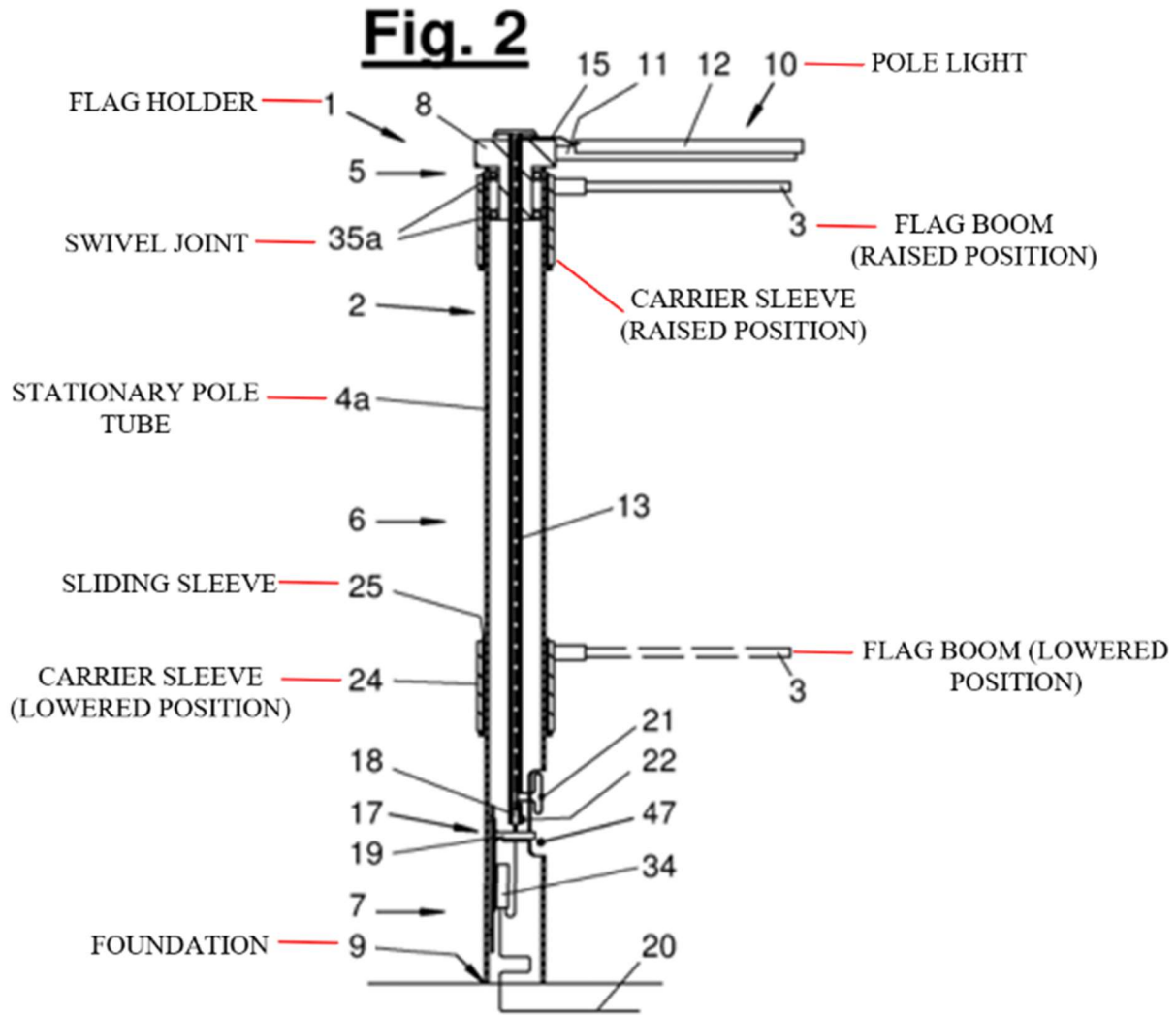
Because each limitation of claim 44 is present in the single German Reference, Melamed Decl. at ¶ 141, the claim is anticipated under 35 U.S.C. § 102.

- ii. *Claim 45: The assembly of claim 44, wherein said at least one rib is attached to a cap located at the top end of said mast.*

The carrier sleeve 24 of the German Reference, when in the raised position, constitutes a cap at the top end of said mast. Melamed Decl. at ¶ 142. The carrier sleeve 24 serves as an overlaying or covering structure and would also serve as a pivot cap. Melamed Decl. at ¶ 143.

The German Reference thus also discloses the additional limitation of claim 45, namely a rib attached to a cap located at the top end of the mast. Melamed Decl.

at ¶ 144. As such, claim 45 is anticipated under 35 U.S.C. § 102 by the German Reference. Melamed Decl. at ¶ 144.



iii. Claim 47: The assembly of claim 44, and comprising an anchor located at the bottom end of said mast.

As noted above, “anchor” is properly construed as “comprising any element that provides weight and/or a mechanism by which to secure assembly into a support surface.” In this regard, the German Reference discusses a base region 7 that is

“fixed immovably and, if necessary, detachably to a foundation (9) or a ground mount.” Ex. 1014 at ¶ [0031]; Melamed Decl. at ¶ 146. This ground mount for the devices described in the German Reference constitutes an anchor as it provides weight and also because it provides a mechanism to secure the rest of the device to the supporting surface (the foundation (9)). Melamed Decl. at ¶ 147.

The German Reference thus also discloses the additional limitation of claim 47, namely an anchor located at the bottom end of said mast. Melamed Decl. at ¶ 145. Consequently, claim 47 is anticipated under 35 U.S.C. § 102 by the German Reference. Melamed Decl. at ¶ 148.

C. Ground III: Claims 44, 45, and 47 are unpatentable over Saiz in view of Barnes

Claims 44, 45, and 47 of the Reissue Patent are unpatentable as obvious over Saiz in view of Barnes.

i. Claim 44

As shown in the discussion below, the combination of Saiz and Barnes discloses every element of claim 44. A person having ordinary skill in the art would be motivated to combine these references and would have a reasonable expectation of success in doing so.

1. Claim 44(a): A sun shade assembly comprising:

As noted above in Section V(B), the preamble is not limiting. Even if consideration of the preamble is appropriate, Saiz is entitled “Aerodynamic

Sunshade” and the abstract states “[t]he present invention is an aerodynamic sunshade” Melamed Decl. at ¶ 149. FIG. 1 of Saiz also illustrates one sunshade. Melamed Decl. at ¶ 149.

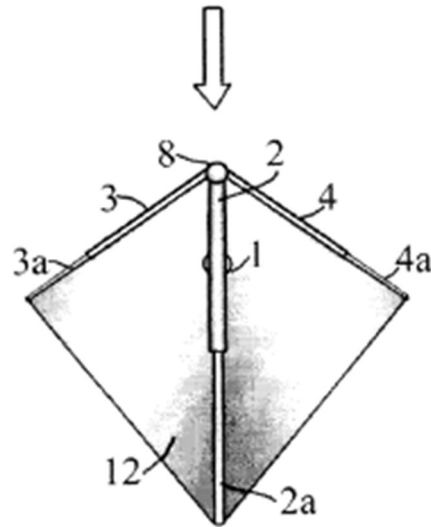


FIG. 1

Barnes also discloses a sun shade assembly, stating in the abstract that “[a] system for providing shade onto a surface is described herein.” Melamed Decl. at ¶ 150. This system 10 is shown in FIG. 1 of Barnes below, and Barnes states “FIG. 1 depicts one embodiment of a system 10 for providing shade 1 onto a surface 2.” Barnes at 3:64–65; Melamed Decl. at ¶ 150.

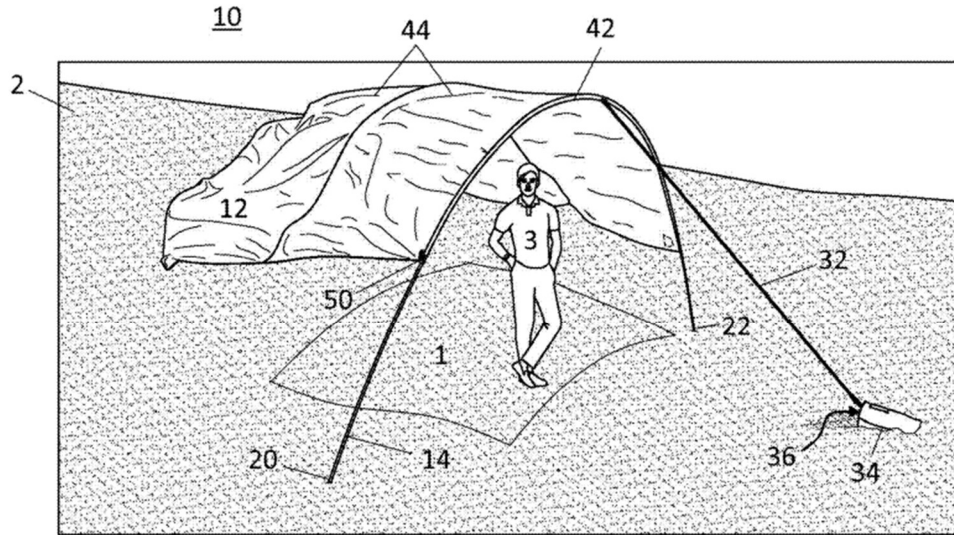


FIG. 1

Thus, even if the preamble is determined to be limiting, the proposed combination of Saiz and Barnes discloses “[a] sun shade assembly.” Melamed Decl. at ¶ 151.

2. *Claim 44(b): A mast configured to extend upwardly from a supporting surface, and having a top end and a bottom end*

As shown in FIG. 1, Saiz discloses a support stem 1 which serves as a mast. Saiz at ¶ [0032]; Melamed Decl. at ¶ 152. The support stem 1 is shown in the top view of FIG. 1. Melamed Decl. at ¶ 152. However, a similar support stem 1 is illustrated in the side view of FIG. 3, and that figure shows that a support stem 1 has a top end and a bottom end.

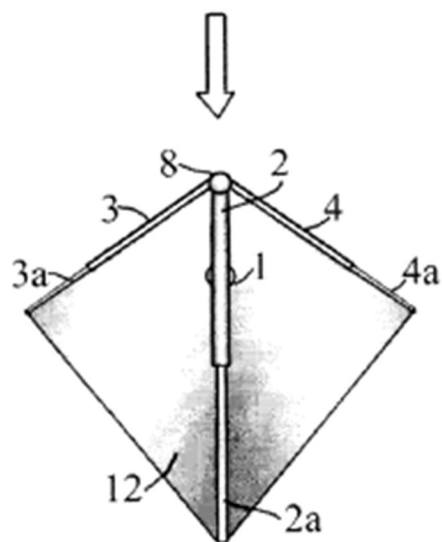


FIG. 1

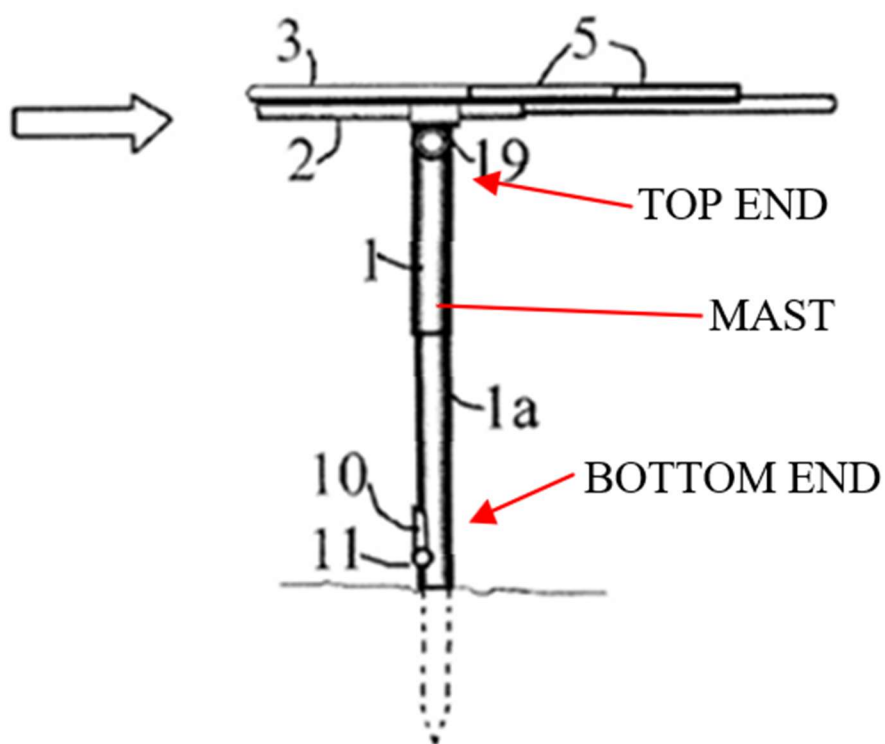


FIG. 3

Melamed Decl. at ¶ 152. Saiz discloses a “stem or mast, which is embedded either in the sand, in a concrete base or a handle” Saiz at ¶ [0004]; Melamed Decl. at ¶ 153. Thus, the stem extends upwardly from a supporting surface. Melamed Decl. at ¶ 153.

The proposed combination of Saiz and Barnes therefore discloses “[a] mast configured to extend upwardly from a supporting surface, and having a top end and a bottom end.” Melamed Decl. at ¶ 154.

3. Claim 44(c): At least one rib located proximate the top end of said mast, and configured to rotate relative to the supporting surface;

The embodiment of FIG. 1 illustrates lateral arms 3 and 4, and these lateral arms are located proximate the top end of the support stem 1. Melamed Decl. at ¶ 155. Telescoping extending arms 3a, 4a are also attached to the lateral arms 3 and 4, and the cloth 12 is attached to these arms 3, 3a, 4, 4a as shown in FIG. 1. Melamed Decl. at ¶ 155. In Saiz, the lateral arms 3 and 4 are attached to the spindle 8, and the spindle allows rotation of the cloth 12. Saiz at ¶ [0032]; Melamed Decl. at ¶ 155.

Saiz possesses ribs (lateral arms 3 and 4) that are capable of rotation relative to the supporting surface. Melamed Decl. at ¶ 156. Saiz notes that “[t]he stem is made up of two telescopic sections connected by dovetailing and sliding in relation to each other, both on a longitudinal and a rotational basis” Saiz at ¶ [0008].

The telescoping sections are able to rotate relative to each other due “to the fact that the stem is connected to an eccentric point, [which] means that the extended cloth of the shade acts as a weather vane under the action of the wind, which makes it very stable and prevents it from being blown away in the event of strong winds.” Saiz at ¶ [0008]; Melamed Decl. at ¶ 156. The telescoping sections are shown in FIG. 13 at locations where reference numbers 1 and 1a are shown.

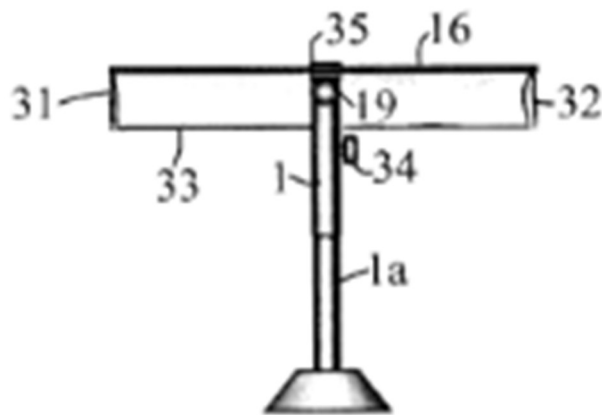


FIG. 13

Melamed Decl. at ¶ 156.

Discussing the telescoping sections, Saiz also notes that, “[i]f so wished, rotation can be eliminated by means of exerting pressure on the inner section with a screw anchored to the outer section or else with a brake.” Saiz at ¶ [0008]; Melamed Decl. at ¶ 157. This is illustrated in FIG. 13, with this figure showing a “knob of fixation with screw (34).” Saiz at ¶ [0044]; Melamed Decl. at ¶ 157.

Rotation of the stem 1 as described in ¶ [0008] of Saiz would also cause rotation of the lateral arms 3 and 4, showing that the lateral arms 3 and 4 are capable of rotation relative to the supporting surface. Melamed Decl. at ¶ 158.

Even with a narrower construction, Saiz possesses “at least one rib . . . specifically designed to rotate relative to the mast.” The stem comprises two telescoping sections. Saiz at ¶ [0008]; Melamed Decl. at ¶ 159. One of these telescoping sections may rotate relative to the other. Saiz at ¶ [0008]; Melamed Decl. at ¶ 159. Thus, the rib would rotate relative to the portion of the stem or mast that is attached to the supporting surface (rod 1a in FIG. 13). Melamed Decl. at ¶ 159.

Thus, the proposed combination of Saiz and Barnes discloses “[a]t least one rib located proximate the top end of said mast.” Melamed Decl. at ¶ 160.

4. *Claim 44(d): A sail having a proximal edge secured to said rib and an unrestrained free edge adapted to unfurl in response to the blowing of the wind, and wherein an entire surface area of said sail is unrestrained from the proximal edge to the free edge; and*

Saiz discloses a sail, but the sail arguably does not have “wherein an entire surface area of said sail is unrestrained from the proximal edge to the free edge” as the main radial arm 2 of Saiz extends from front to back of the cloth 12. Melamed

Decl. at ¶ 161. However, this “unrestrained” limitation is disclosed in Barnes. Melamed Decl. at ¶ 161.

The embodiment shown in FIG. 1 of Barnes discloses that the “canopy 12 may define a suspension end 42 positioned proximal to the frame 14 when the canopy 12 is engaged with the frame 14.” Barnes at 4:7–9; Melamed Decl. at ¶ 162.

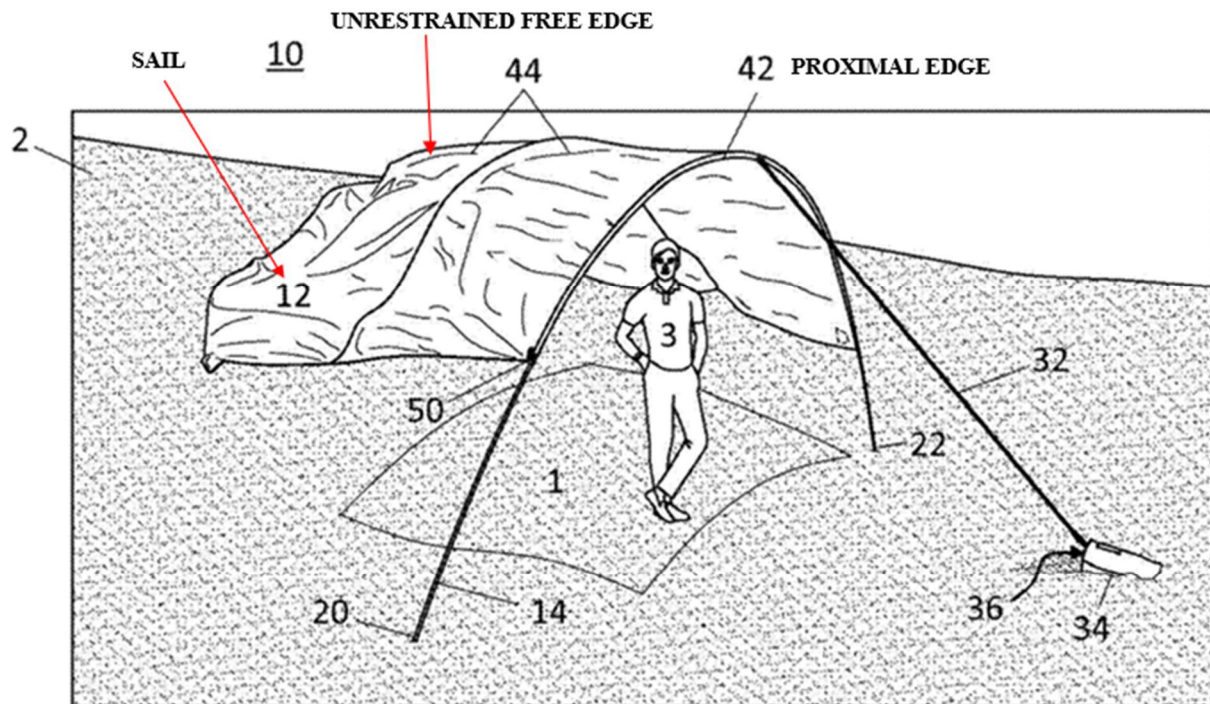


FIG. 1

Melamed Decl. at ¶ 162.

The canopy 12 serves as the required sail, and the suspension end 42 is the required proximal edge. Melamed Decl. at ¶ 163. FIG. 1 also shows that the system 10 of Barnes includes an unrestrained free edge adapted to unfurl in response to the

blowing of the wind as required by Claim 44. Melamed Decl. at ¶ 163. Barnes also notes that the canopy is aerially suspended on numerous occasions. Barnes at Abstract, 1:53–55, 1:62–63; 7:45–48; claim 1; claim 11; Melamed Decl. at ¶ 163. This further evidences that Barnes discloses an unrestrained free edge. Melamed Decl. at ¶ 163.

If Saiz and Barnes are combined by attaching at least one of lateral arms 3 and 4 from the Saiz device, each of which is equivalent to the claimed “at least one rib,” to the suspension end 42 of the Barnes device, the limitation “an entire surface area of said sail is unrestrained from the proximal edge to the free edge” would still be met. Melamed Decl. at ¶ 164. As shown in FIG. 1 of Barnes, nothing is present from the proximal edge to the unrestrained free edge to restrain the canopy of Barnes. Melamed Decl. at ¶ 164.

Thus, the proposed combination of Saiz and Barnes discloses “[a] sail having a proximal edge secured to said rib and an unrestrained free edge adapted to unfurl in response to the blowing of the wind, and wherein an entire surface area of said sail is unrestrained from the proximal edge to the free edge.” Melamed Decl. at ¶ 165.

5. *Claim 44(e): When unfurled, said sail and rib are adapted to rotate together to a direction of the blowing wind.*

Saiz describes advantages of its invention and states that it is “stable in the face of wind” as it “is self-directional and offers little resistance.” Saiz at ¶ [0014]; Melamed Decl. at ¶ 166.

At Paragraph [0032], Saiz states that “FIG. 1 consists of . . . cloth (12), secured by the ends of the rods,” that the cloth (12) “is extended like a fan, taking on the form of a kite” and that it indicates its direction in respect of the wind arrow.” Melamed Decl. at ¶ 166. As described above, the lateral arms 3 and 4 rotate with the central arm 2, Saiz at ¶ [0008], allowing the cloth (12) and the lateral arms 3 and 4 to rotate together to a direction of the blowing wind. Melamed Decl. at ¶ 166. As a result, “the extended cloth of the shade acts as a weather vane under the action of the wind. . . .” Saiz at ¶ [0008]; Melamed Decl. at ¶ 166.

Thus, the proposed combination of Saiz and Barnes discloses that, “[w]hen unfurled, said sail and rib are adapted to rotate together to a direction of the blowing wind.” Melamed Decl. at ¶ 167.

6. *Claim 44: Rationale to Combine Saiz and Barnes and reasonable expectation of success.*

A person of ordinary skill in the art would be motivated to modify Saiz to attach the suspension end 42 of the Barnes canopy 12 to the arms 3, 3a, 4, 4a of Saiz, thereby providing a sail and a rib that are adapted to rotate together to a direction of the blowing wind. Melamed Decl. at ¶¶ 168, 175.

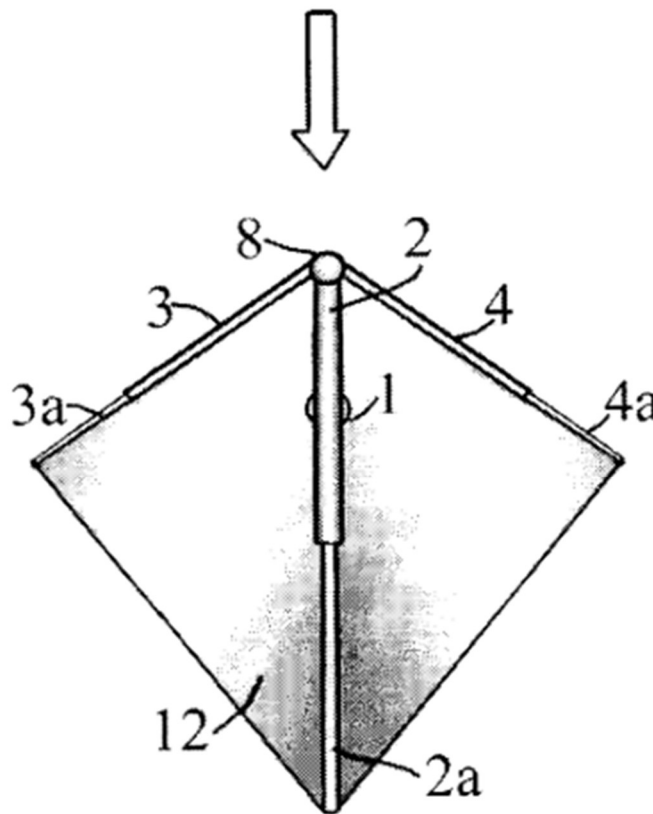


FIG. 1

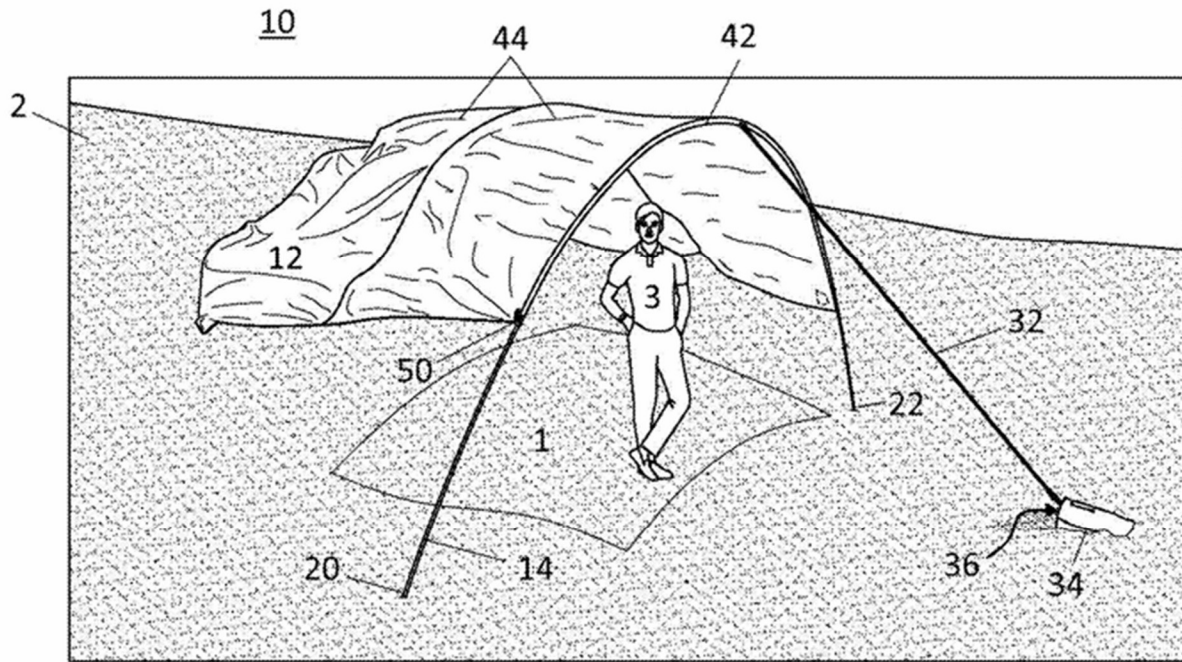


FIG. 1

Barnes discloses that the canopy 12 defines a loop 40. Barnes at 4:15–18; Melamed Decl. at ¶ 169. This loop 40 is configured to accept a portion of the frame 14 depicted in FIG. 1 through the loop 40. Barnes at 4:15–18; Melamed Decl. at ¶ 169. The loop 40 is depicted in FIG. 4 of Barnes, and the frame 14 is depicted in FIG. 1 of Barnes (see below). Melamed Decl. at ¶ 169. The frame 14 is a slender tube, similar in shape to the arms 3, 3a, 4, and 4a of Saiz, Melamed Decl. at ¶ 169, and would be inserted through the loop 40 in a similar manner.

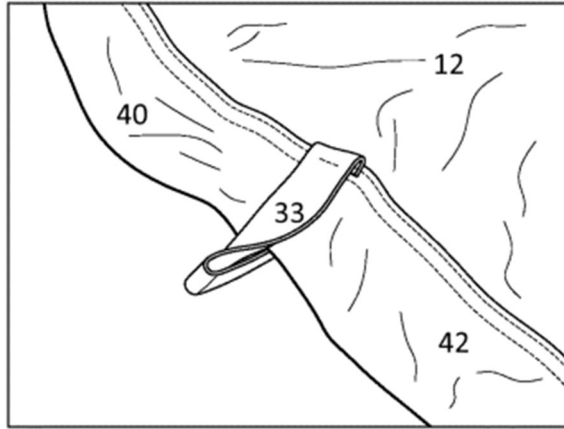


FIG. 4

It would have been obvious to combine Saiz and Barnes and to modify the device of Saiz to include the canopy of Barnes. Melamed Decl. at ¶ 170. Both references are in the same field and relate to devices that are configured to provide shade to users. Melamed Decl. at ¶ 170. Also, in the process of new product development, it is considered standard to research the category, examine all existing art, and then to design, develop, and test. Melamed Decl. at ¶ 171. This process would be conducted iteratively until the most successful conclusion possible is accomplished. Melamed Decl. at ¶ 171. This further suggests that a person of ordinary skill in the art would have arrived at the material described in Claims 44, 45, and 47.

A person of ordinary skill in the art would be motivated to modify the device of Saiz to include the canopy of Barnes to make the device of Saiz more lightweight

and easier to assemble. Melamed Decl. at ¶ 172. Both references show a motivation to enable the sail or covering device to have flexibility and ability to move when faced with heavy wind. Melamed Decl. at ¶ 172. For example, Barnes states, in its background section, that “[s]ome systems include rigid canopy susceptible to being shifted or unanchored by wind.” Barnes at 1:25–27; Melamed Decl. at ¶ 172. Saiz also states in its section regarding the prior art that “[c]urrent sunshades are not efficient and stable when the wind blows through not being aerodynamic or self-directional and not having the anchor point advanced in relation to the centre of application of resistance and through this being high.” Saiz at ¶ [0003]; Melamed Decl. at ¶ 172. Given that both references acknowledge this common issue, a person of ordinary skill in the art would have considered both references. Melamed Decl. at ¶ 172. Saiz, Barnes, and the other prior art references discussed herein clearly constitute “analogous art.” Melamed Decl. at ¶ 41.

Barnes also states that “[o]ther systems are cumbersome to transport or assemble, due to the number of parts involved, steps required during setup and/or low shade to weight ratios.” Barnes at 1:25–30; Melamed Decl. at ¶ 173. Barnes states, in its background section, that “there remains a need for systems and methods including flexible canopy structures capable of being at least partially supported by wind and configured for easy [] transport and assembly.” Barnes at 1:31–34 (emphasis added); Melamed Decl. at ¶ 173. Thus, Barnes expresses a clear need in

the art for lightweight and easy to assemble shade devices. Melamed Decl. at ¶ 173. To accomplish this goal, Barnes used the canopy 12 which was aurally suspended, and Barnes touts the lightweight materials that are used in the canopy. Barnes at 3:67–4:6 (“The canopy 12 may include one or more lightweight materials”); Melamed Decl. at ¶ 173.

Barnes also expressed a desire to partially support flexible canopy structure using the wind. Barnes at 1:31–34 (emphasis added); Melamed Decl. at ¶ 174. Barnes accomplished this by providing a canopy 12 without any supporting rods or arms from the suspension end 42 (i.e., the proximal edge) to the unrestrained free edge. Melamed Decl. at ¶ 174.

A person having ordinary skill in the art would have had a reasonable expectation of success in combining the references as noted. Melamed Decl. at ¶ 176. A person having ordinary skill in the art considering the teachings of Saiz and Barnes would have succeeded in implementing them together, as doing so amounts to a simple combination of basic mechanical components. Melamed Decl. at ¶ 176. The proposed combination simply requires removal of the existing cloth 12 of Saiz, with this cloth 12 being replaced by the canopy 12 of Barnes, with the arms 3, 3a, 4, 4a of Saiz being inserted into the internal volume of the loop 40 in the canopy 12 of Barnes. Melamed Decl. at ¶ 176.

Numerous rationales support such an obviousness combination: (i) this combination would merely combine prior art elements according to known methods to yield predictable results; (ii) attachment of the canopy 12 of Barnes to the arms 3, 3a, 4, 4a of Saiz would use a known technique to improve a similar device in the same way; (iii) attachment of the canopy 12 of Barnes to the arms 3, 3a, 4, 4a of Saiz applies a known technique to a known device ready for improvement to yield predictable results; (iv) attachment of the canopy 12 of Barnes to the arms 3, 3a, 4, 4a of Saiz would be obvious to try, and a person having ordinary skill in the art (POSITA) would choose from a finite number of identified, predictable solutions, with a reasonable expectation of success; and (v) attachment of the canopy 12 of Barnes to the arms 3, 3a, 4, 4a of Saiz would apply a known work in one field of endeavor (e.g., mechanical arts) to prompt variations of it for use in either the same field based on design incentives or other market forces, with the variations being predictable to one of ordinary skill in the art. Melamed at ¶ 177.

The obvious combination of Saiz and Barnes thus includes all the limitations of claim 44, and claim 44 is obvious to a POSITA over Saiz and Barnes. Melamed Decl. at ¶ 178.

- ii. ***Claim 45: The assembly of claim 44, wherein said at least one rib is attached to a cap located at the top end of said mast.***

FIG. 1 of Saiz shows lateral arms 3 and 4 and telescopic extending arms 3a and 4a, and a spindle 8 for the attachment and rotation of the cloth 12. Saiz at ¶ [0032]; Melamed Decl. at ¶ 179. The spindle 8 is positioned at the top end of the mast formed by the stem 1. Melamed Decl. at ¶ 179. The spindle 8 provides an overlaying or covering structure. Melamed Decl. at ¶ 179.

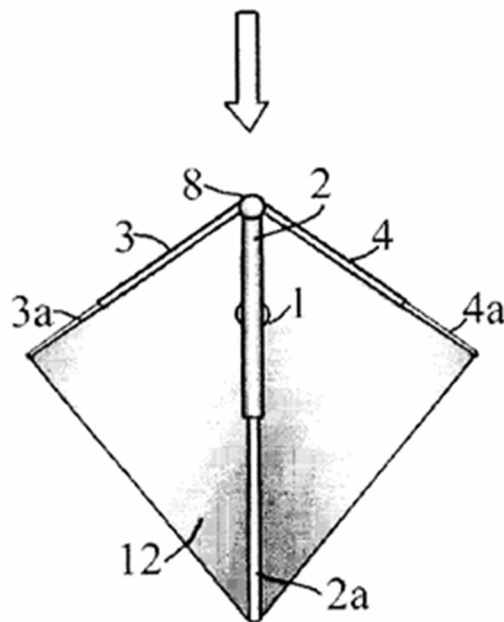


FIG. 1

Thus, the proposed combination of Saiz and Barnes discloses that the “at least one rib is attached to a cap located at the top end of said mast.” Melamed Decl. at ¶ 180. The obvious combination of Saiz and Barnes thus includes all the limitations

of claim 45, and claim 45 is obvious to a POSITA over Saiz and Barnes. Melamed Decl. at ¶ 180.

iii. Claim 47: The assembly of claim 44, and comprising an anchor located at the bottom end of said mast.

Saiz discloses an anchor in the form of the rod 1a. Melamed Decl. at ¶ 181. As shown in FIG. 3, the rod 1a extends into the support surface to secure the assembly. Melamed Decl. at ¶ 181. Because the upper rod 1 is allowed to freely rotate relative to the lower rod 1a, very limited forces act at the bottom point of the lower rod 1a where the lower rod 1a is inserted into the supporting surface, and the lower rod 1a of the would not rotate during normal operating conditions. Melamed Decl. at ¶ 181.

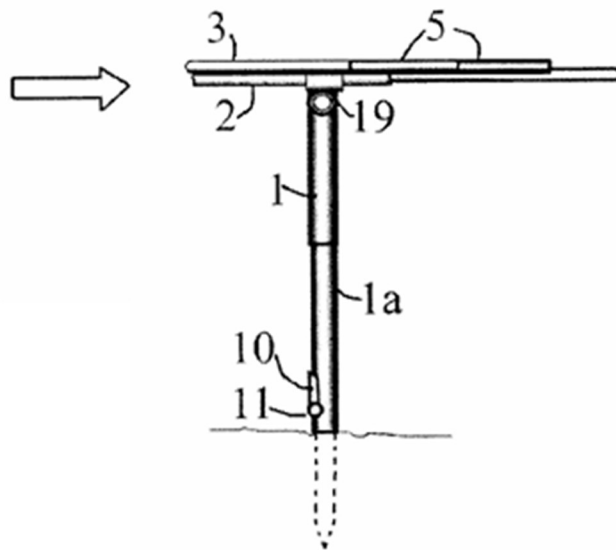


FIG. 3

Melamed Decl. at ¶ 181.

Additionally, Saiz notes that the stem or mast is embedded either in the sand or “in a concrete base.” Saiz at ¶ [0004]; Melamed Decl. at ¶ 182. Such a concrete base would constitute an “element that provides weight” and would serve as an anchor. Melamed Decl. at ¶ 182.

Thus, the proposed combination of Saiz and Barnes discloses an “anchor located at the bottom end of said mast,” with anchor being construed as noted above. Melamed Decl. at ¶ 183. The obvious combination of Saiz and Barnes thus includes all the limitations of claim 47, and claim 47 is obvious to a POSITA over Saiz and Barnes. Melamed Decl. at ¶ 183.

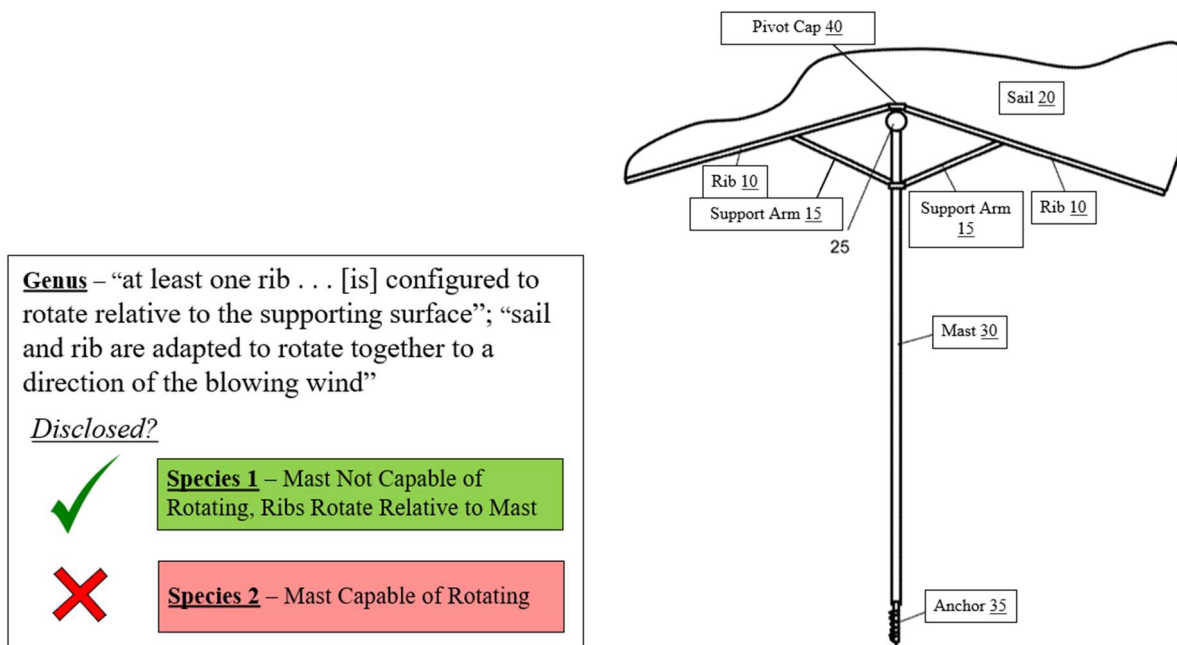
D. Ground IV: Claims 44, 45, and 47 are invalid pursuant to 35 U.S.C. § 112 as lacking written description support.

Especially if claim 44 of the Reissue Patent is read as broadly as Patent Owner wants, it is invalid at least because of a lack of adequate written description. Melamed Decl. at ¶ 184.

To satisfy the written description requirement of Section 112(a), the patent’s disclosure must “reasonably convey[] to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Brita LP v. Int’l Trade Comm’n*, 156 F.4th 1326, 1331 (Fed. Cir. 2025) (quoting *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (*en banc*)). Assessing such “possession as shown in the disclosure” requires “an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art.” *Id.* (quoting

Ariad, 598 F.3d at 1351). “[T]he specification must describe an invention understandable to [a person of ordinary skill in the art] and show that the inventor actually invented the invention claimed.” *Id.* at 1331–32 (quoting *Ariad*, 598 F.3d at 1351).

For a broad, functional claim to meet the written description requirement, the patentee must demonstrate he “has invented species sufficient to support a claim to the functionally-defined genus.” *Id.* at 1335 (quoting *Ariad*, 598 F.3d at 1349). This is where Claim 44 fails.



Claim 44 is a claim added in the reissue application by which Patent Owner attempted to obtain broader coverage than it got in the Original Patent. An annotated version of FIG. 1 of the Reissue Patent is shown above with various claim terms shown to aid the discussion. Claim 44 requires that “at least one rib . . . [is] configured to rotate relative to the supporting surface.” All the description in the Reissue Patent

indicates that this limitation is met by rotating the rib relative to a non-rotatable mast. See Reissue Patent at 3:7–10, 7:34–38, 9:1–2, 12:39; Melamed Decl. at ¶ 186. In other words, the specification only describes a species where the mast does not rotate. Melamed Decl. at ¶ 187. The pivot cap, the ribs, and support arms are always described as being able to rotate relative to the mast to allow the ribs to rotate to the direction of the blowing wind. Melamed Decl. at ¶ 187.

The Reissue Patent also states “because the sail rotates relative to the mast it prevents loosening the auger position and thereby causing failure of the assembly.” Reissue Patent at 12:42–44. Thus, the Patent Owner was indicating that failure would likely occur if the auger was loosened or if the mast rotated, indicating that the claimed “invention” does not encompass a device in which the mast rotated. Melamed Decl. at ¶ 188.

The patent examiner’s statements indicate that he interpreted the claim as limited to the disclosed species (i.e., a nonrotating mast with rotating ribs). Melamed Decl. at ¶ 189. In the examiner’s statement of reasons for allowance, he discussed application claim 47, which became claim 44 in the Reissue Patent after the claims were renumbered for issuance. Melamed Decl. at ¶ 189. There, the examiner stated the closest prior art was Saiz, which he distinguished by stating that “Saiz does teach rotation, ***but this rotation is effected by the mast, and not relative to the mast.***” Ex. 1004 at 18; Melamed Decl. at ¶ 189. Thus, in the examiner’s view, the ribs of the Reissue Patent must rotate “relative to

the mast,” and this was the critical point of distinction between Saiz and the present claim. Melamed Decl. at ¶ 189. Now that Patent Owner has obtained a patent, it is improperly trying to use a broader interpretation compared to the interpretation on which the claim was granted. *Data Engine Techs. LLC v. Google LLC*, 10 F.4th 1375, 1381 (Fed. Cir. 2021) (citations and internal quotation marks omitted).

Because the specification does not support an interpretation of claim 44 that would literally cover a rotating mast as the Patent Owner now contends, Melamed Decl. at ¶ 190, claim 44 is invalid. A POSITA would understand that the Patent Owner was not in possession of an invention as described in claim 44 as of August 28, 2019. Melamed Decl. at ¶ 190. As claims 45 and 47 do not contain additional limitations that cure this defect in claim 44, they are invalid for the same reason. Melamed Decl. at ¶ 190.

E. Ground V: Claims 44, 45, and 47 are invalid pursuant to 35 U.S.C. § 112 for failure to satisfy the enablement requirement.

The “specification must enable the full scope of the invention as defined by its claims, allowing for a reasonable amount of experimentation.” *Seagen Inc. v. Daiichi Sankyo Co., Ltd.*, 160 F.4th 1322, 1332 (Fed. Cir. 2025) (quoting *Amgen v. Sanofi*, 598 U.S. 594, 610, 612 (2023)) (quotations marks removed). “To be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation.” *Id.* at 1332 (quoting *MagSil Corp. v. Hitachi Glob. Storage Techs., Inc.*, 687 F.3d 1377, 1380 (Fed. Cir. 2012) (cleaned up)).

“If a patent claims an entire class of processes, machines, manufactures, or compositions of matter, the patent’s specification must enable a person skilled in the art to make and use the entire class.” *Brita*, 156 F.4th at 1336 (quoting *Amgen*, 598 U.S. at 610). “In other words, the specification must enable the full scope of the invention as defined by the claims.” *Id.* (quoting *Amgen*, 598 U.S. at 610).

The standard for enablement is whether a person skilled in the art can “make and use” the full scope of the invention “without undue experimentation.” *Id.* at 1336–37 (quoting *In re Wands*, 858 F.2d 731, 735–37 (Fed. Cir. 1988)); *Seagen*, 160 F.4th at 1332 (quoting *MagSil*, 687 F.3d at 1380) (cleaned up). In determining whether disclosure would require undue experimentation, courts “consider (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims.” *In re Wands*, 858 F.2d at 737.

Genus – “at least one rib . . . [is] configured to rotate relative to the supporting surface”; “sail and rib are adapted to rotate together to a direction of the blowing wind”

Disclosed?

	<u>Species 1</u> – Mast Not Capable of Rotating, Ribs Rotate Relative to Mast
	<u>Species 2</u> – Mast Capable of Rotating

Here, the Reissue Patent only provides guidance and examples regarding a mast not capable of rotating where the ribs rotate relative to the mast so that the ribs rotate relative to the supporting surface—all discussion in the Reissue Patent indicates that rotation of the ribs 10 occurs as a result of rotation of the rib relative to a non-rotatable mast. Melamed Decl. at ¶ 192; *see also* Reissue Patent at 3:7–10; 6:5–8; 7:33–38; 8:59–9:2; 12:36–42. However, no guidance or examples are provided regarding a mast that is capable of rotating relative to the supporting surface to enable rotation of the ribs relative to the supporting surface. Melamed Decl. at ¶ 192.

In fact, the direction or guidance provided in the Reissue Patent would lead a person of ordinary skill in the art away from using an embodiment where the mast rotates. Melamed Decl. at ¶ 193. For example, the Reissue Patent states “because the sail rotates relative to the mast it prevents loosening the auger position and thereby

causing failure of the assembly.” Reissue Patent at 12:42–44 (emphasis added); Melamed Decl. at ¶ 194.

The Reissue Patent also discusses deficiencies in conventional beach umbrellas. Melamed Decl. at ¶ 195. In the background, the Reissue Patent discusses “conventional beach umbrellas,” stating that “[c]onventional beach umbrellas include a single central support pole with a pointed lower end that is inserted directly into the sand,” that “conventional umbrellas can easily tip over or be blown down the beach where they can cause hassle to the owner as well as injury to other beachgoers,” and that “[c]onventional umbrellas are also prone to wind breakage.” Reissue Patent at 1:40–43, 1:49–52; Melamed Decl. at ¶ 195. In light of these supposed deficiencies, the Reissue Patent states that “[i]t would therefore be beneficial to provide an umbrella with improved stability in response to the wind blowing.” Reissue Patent at 1:52–54; Melamed Decl. at ¶ 196.⁴

Thus, the specification does not enable an embodiment in which the ribs are secured against rotation to the mast, but the entire mast itself is allowed to rotate.

⁴ The Provisional Application also repeatedly mentioned these deficiencies in conventional beach umbrellas, stating “[s]hade umbrellas are dangerous in the wind,” that they “easily break in the wind,” that they “don’t do well in the wind and they are dangerous.” Provisional Application at 1.

Melamed Decl. at ¶ 197. Accordingly claim 44 is invalid under 35 U.S.C. § 112(a) as failing to satisfy the enablement requirement. As claims 45 and 47 do not contain additional limitations that cure this defect in claim 44, they are invalid for the same reason.

XI. THE BOARD SHOULD INSTITUTE POST-GRANT REVIEW

A. Challenges are Not Cumulative of Prosecution

The Board should not deny institution under § 325(d). 35 U.S.C. § 325(d) states that, “[i]n determining whether to institute or order a proceeding under this chapter, chapter 30, or chapter 31, the Director may 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.” Under § 325(d), the Board uses the following two-part framework: “(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 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*, Case IPR2019-01469, Paper 6 at 8 (February 13, 2020) (precedential, designated: March 24, 2020).

Based solely on the first part of the *Advanced Bionics* framework, the Board should not deny institution. IPR2019-01469, Paper 6 at 8-9 (PTAB Feb. 13, 2020)

(precedential). The only prior art relied upon herein that was previously presented to the Office was Saiz. However, Petitioner presents an obviousness combination herein based on a combination of Saiz and Barnes, and Barnes was never considered during prosecution. None of Barnes, Neal, or the German Reference are the same or substantially the same as any art that was previously presented to the USPTO. The arguments presented are not the same or substantially the same as those presented previously. Critically, the other references that were cited during prosecution failed to disclose the limitation “wherein an entire surface area of said sail is unrestrained from the proximal edge to the free edge,” and Barnes clearly meets this limitation. This constitutes a material difference between Barnes, a reference that was not before the Examiner, and the other prior art involved during examination. Barnes is not cumulative of the art that was evaluated during examination because of this material difference.

Given that the first part of the framework is not satisfied, it is unnecessary to reach the second part. However, even at the second part of the framework, the Office erred in a manner material to the patentability of challenged claims by failing to find or cite the free-sailing canopy 12 of Barnes to formulate an obviousness rejection of Claims 44, 45, and 47.

B. The *Fintiv* factors favor institution

The Patent Owner has asserted the Reissue Patent against Petitioner in the Southern District of Georgia. The Board balances six factors in considering discretionary denial under § 314(a) when parallel litigation is ongoing. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential). The *Fintiv* factors weigh strongly against discretionary denial.

i. Factor 1 is neutral (possibility of a stay)

This factor is neutral—“[i]n the absence of specific evidence, [the Board] will not attempt to predict how the district court in the related district court litigation will proceed because the court may determine whether or not to stay any individual case, including the related one, based on a variety of circumstances and facts beyond our control and to which the Board is not privy.” *Sand Revolution II, LLC v. Continental Intermodal Group – Trucking LLC*, Case IPR2019-01393, Paper 24 at 7 (June 16, 2020) (informative).

“A district court stay of the litigation pending resolution of the PTAB trial allays concerns about inefficiency and duplication of efforts. This fact has strongly weighed against exercising the authority to deny institution under *NHK*.” *Fintiv*, IPR2020-00019, Paper 11 at 6.

A stay would be appropriate under the legal standard in the Southern District of Georgia, particularly if a PGR is instituted. A stay pending the outcome of a PGR

in the co-pending district court litigation has not yet been requested, but Petitioner intends to file a motion to stay soon after the filing of this petition. Courts in the Eleventh Circuit have frequently granted stays when an IPR or a PGR was awaiting an institution decision by the PTAB. *Doubleday Acquisitions LLC v. Envirotainer AB*, No. 1:21-cv-03749, 2022 WL 18778991, at *5 (N.D. Ga. June 3, 2022); *Aegis II S.A. v. Hisense Co., Ltd.*, No. 1:20-cv-3891-MHC, 2021 WL 12300139 (N.D. Ga. June 23, 2021); *Epic Tech, LLC v. Pen-Tech Assocs., Inc.*, No. 1:20-cv-02428, 2020 WL 8258736 (N.D. Ga. Sept. 28, 2020). “In the patent litigation context, courts have reasoned that a stay pending a related [PTAB] proceeding should be liberally granted, especially when the [PTAB’s] review may assist the court in disposing of the civil action.” *Phelan Grp., LLC v. Mercedes-Benz Grp. AG*, No. 1:25-cv-1399, 2025 WL 3303050, at *2 (N.D. Ga. Oct. 3, 2025) (emphasis added) (citing *Andersons, Inc. v. Enviro Granulation, LLC*, No. 8:13-cv-3004, 2014 WL 4059886, at *2 (M.D. Fla. Aug. 14, 2014) (collecting cases) (granting stay in a case involving seven patents where an inter partes review proceeding had been instituted for one patent and institution decisions for the six other patents had not yet been entered); *Epic Tech*, 2020 WL 8258736, at *2 (listing the benefits of staying infringement litigation pending PTAB proceedings)); *see also VirtualAgility Inc. v. Salesforce.com, Inc.*, 759 F.3d 1307, 1316 (Fed. Cir. 2014) (stating that a motion to stay may be granted even before the PTAB rules on a petition).

The litigation is at a very early stage. At the time of filing, Patent Owner only provided its supplemented infringement contentions on June 15th (corrections were required to address deficiencies that were present in the initial infringement contentions provided on June 8).⁵ Therefore, a stay pending this post-grant review proceeding would be appropriate due to the early stage of the district court action.

While Patent Owner filed its litigation Complaint on November 7, 2025, Ex. 1017, Patent Owner has filed two separate motions for a preliminary injunction, both of which have been denied. The initial Complaint and a first motion for preliminary injunction were filed on November 7, 2025 accusing ShoreShade's first generation product of infringement. Ex. 1018. Petitioner filed a motion to dismiss (Ex. 1019) and its response to the motion for a preliminary injunction (Ex. 1020) on November 19, 2025, stating that no infringing act (e.g., making, using, offering to sell, selling, or importing) had occurred since the grant of the Reissue Patent for the first generation product and that Petitioner was moving to a second generation product. A hearing was conducted on December 1, 2025, resulting in entry of an order on December 22, 2025 denying the first motion for a preliminary injunction. Ex. 1021.

⁵ *Fintiv*, Case IPR2020-00019, Paper 11 at 11 (stating that "it is often reasonable for a petitioner to wait to file its petition until it learns which claims are being asserted against it in the parallel proceeding").

After the first motion for a preliminary injunction was denied, the parties conducted a Rule 26(f) conference on January 20, 2026 and February 2, 2026. Ex. 1022. Based on agreement of Petitioner and Patent Owner, the case was stayed on February 23, 2026, pending a ruling on the motion to dismiss. Ex. 1023.

On April 30, 2026, while the case was stayed, Patent Owner filed a second motion for a preliminary injunction focusing exclusively on ShoreShade's second generation product. Ex. 1024. Petitioner then filed a response to the second motion for a preliminary injunction (Ex. 1025) and a hearing was conducted on May 8, 2026. The court denied the second motion for a preliminary injunction on May 18, 2026, concluding that the Patent Owner failed to show a likelihood of success on its infringement claims for the second generation product. Ex. 1026.

Since then the Court has entered a Scheduling Order (Ex. 1027) resulting in service of Patent Owner's infringement contentions (Ex. 1028). ShoreShade's invalidity contentions are due July 23, 2026, so those are yet to be served. No additional discovery has been conducted in the litigation.

Given the early stage of the case, a stay of that proceeding is relatively likely, particularly if this petition is instituted.

ii. ***Factor 2 favors institution (proximity of trial date to final written decision)***

Fintiv states that, “[i]f the court’s trial date is at or around the same time as the projected statutory deadline or even significantly after the projected statutory deadline, the decision whether to institute will likely implicate other factors” IPR2020-00019, Paper 11, at 9.

Any final written decision in the PGR will be due by December 30, 2027. While no trial date or pretrial conference date has been set in the district court litigation, the trial date will likely fall after December 30, 2027, even assuming the court does not grant a stay. With a stay, any final written decision would of course occur long before any trial in the litigation.

Without a stay, the litigation would proceed according to the current scheduling order. Ex. 1027. Assuming that the court enters a claim construction on January 8, 2027, which is about five weeks after reply claim construction briefs are submitted (given the time for holidays), the last day for filing civil motions (e.g., motions for summary judgment) would be on September 5, 2027. The last day for filing civil motions is currently the final deadline provided in the scheduling order.

Pursuant to the local rules in the Southern District of Georgia, thirty-five (35) days would be necessary for full briefing to occur on a motion for summary judgment, including a response and a reply, so any reply would presumably be filed

on October 10, 2027. The court would then need to set a hearing for any motion for summary judgment and then enter an order granting or denying any motions for summary judgment or other civil motions that have been filed. Thus, while the exact trial date is unknown at this time, it will very likely be after the final written decision due date, even if no stay is entered.

Because of the uncertainty of the trial date, this factor weighs against discretionary denial. *See Sand Revolution II*, Case IPR2019-01393, Paper 24 at 8–10 (uncertainty over trial date weighed against discretionary denial); *see also Multi-Color Corp. v. Brook & Whittle Limited*, PGR2025-00025, Paper 10 at 2 (July 16, 2025) (instituting PGR proceeding even when the trial date was four months before the final written decision due date).

Therefore, this factor favors institution.

iii. Factor 3 favors institution (investment in parallel proceeding)

ShoreShade is filing this petition promptly after becoming aware of the claims being asserted and before any invalidity contentions have been served. At the time

of this filing, Patent Owner only provided its supplemented infringement contentions on June 15th.⁶ Neither party has served discovery yet.

The early stage of the litigation weighs against discretionary denial.

iv. Factor 4 favors institution (overlap in issues)

Petitioner stipulates that it will not pursue in the litigation the grounds it raised or could have reasonably raised in the petition if this petition is instituted as was done in *Sotera Wireless, Inc. v. Masimo Corporation*, IPR2020-01019, Paper 12 (December 1, 2020). Petitioner’s stipulation ensures that any post grant review is a “true alternative” to the district court proceeding. *Id.* at 19. Given this stipulation, any concerns of duplicative efforts between the district court and the Board, as well as concerns of potentially conflicting decisions, are mitigated. *Id.* at 19. Thus, this factor weighs strongly in favor of not exercising discretion to deny institution. *Id.* at 19.

If the district court litigation is stayed pending resolution of this proceeding, this will result in significant simplification of issues in the litigation. *MED-EL Elektromedizinische Geräte GmbH v. Sonova AG*, IPR2020-00176, Paper 13 at 15

⁶ *Fintiv*, Case IPR2020-00019, Paper 11 at 11 (stating that “it is often reasonable for a petitioner to wait to file its petition until it learns which claims are being asserted against it in the parallel proceeding”).

(PTAB June 3, 2020) (“As to the fourth factor, the parties do not dispute that overlap exists between the invalidity issues in this case and in the district court. This overlap may inure to the district court’s benefit, however, by simplifying issues for trial should we reach our determination on the challenges raised in the Petition before trial.”). If the final written decision cancels the claims, the claims would no longer need to be addressed in the litigation. If the final written decision does not cancel the claims, then this would simplify the issues by focusing the remaining litigation on issues of non-infringement. Additionally, these proceedings would provide further clarity on the appropriate constructions for various claims and would inform subsequent litigation proceedings if any issues remain at that point.

v. ***Factor 5 is neutral (whether the petitioner and the defendant in the parallel proceeding are the same party)***

As is true of most petitioners in IPR and PGR proceedings, Petitioner is a defendant in the litigation. Ex. 1017. In *Google LLC v. Parus Holdings, Inc.*, IPR2020-00846, Paper 9 (Oct. 21, 2020), the panel noted that this factor “could weigh either in favor of, or against, exercising discretion to deny institution, depending on which tribunal was likely to address the challenged patent first.” *Id.* at 21. This factor is neutral because, although it is likely the PTAB would address the validity of the Reissue Patent first, this is not known with certainty at this stage.

vi. ***Factor 6 favors institution (other circumstances)***

Numerous other reasons cause this factor to weigh decisively against discretionary denial. In addition, the challenged patent issued on September 30, 2025, and Petitioner filed its Petition on June 30, 2026—nine months from the grant of the challenged patent. “Petitions for post-grant review are favored because they must be filed no later than nine months from the grant of the patent (35 U.S.C. § 321(c)), are close in time to examination, and occur before expectations in the patent rights are strongly settled.” *Multi-Color*, PGR2025-00025, Paper 10 at 2–3 (citing *LifeVac, LLC v. DCSTAR Inc.*, IPR2025-00454, Paper 11 at 2 (PTAB July 11, 2025)).

As discussed in Section X, the prior art presented in this Petition renders the challenged claims unpatentable as obvious. The merits of Petitioner’s arguments are strong, and this factor favors institution. *Fintiv*, Paper 11 at 14–15 (“[I]f the merits of a ground raised in the petition seem particularly strong on the preliminary record, this fact has favored institution.”).

Other considerations regarding the small business status of Petitioner and the location where products are manufactured also weigh against discretionary denial.⁷

⁷ Additional Discretionary Institution Considerations – U.S. Manufacturing and Small Business Use in AIA Proceedings, March 11, 2026, https://www.uspto.gov/sites/default/files/documents/Additional_Discretionary_Inst

Petitioner is a small, American business, qualifying as a small-entity under 37 C.F.R. § 1.27(a). Petitioner does not have its products manufactured in the United States, but neither does Patent Owner, who imports its products from China. Schulze Declaration (Ex. 1029); Ex. 1030 (import records showing that Solbello imports its products from China); Ex. 1031 (showing information on box for Solbello product showing that product was made in China).

Since the beginning, Petitioner has maintained a consistent claim construction position on the term “at least one rib . . . configured to rotate relative to the supporting surface” while Patent Owner has shifted in its infringement theory and its claim construction position for this term.

The shifting positions from Patent Owner weigh against any discretionary denial. The Board’s claim construction rules are designed to ensure that the Board correctly construes claim terms and to minimize inconsistency in claim construction between forums. *Revvo Techs., Inc. v. Cerebrum Sensor Techs., Inc.*, IPR2025-00632, Paper 20 at 4–5 (November 3, 2025) (designated: November 3, 2025) (citing *Changes to the Claim Construction Standard for Interpreting Claims in Trial*

[institution Considerations US Manufacturing and Small Business Use of AIA Proceedings.pdf?utm_campaign=subscriptioncenter&utm_content=&utm_medium=email&utm_name=&utm_source=govdelivery&utm_term=.](https://www.uspto.gov/patents/inter partes/review/considerations-us-manufacturing-and-small-business-use-of-ai-a-proceedings.pdf?utm_campaign=subscriptioncenter&utm_content=&utm_medium=email&utm_name=&utm_source=govdelivery&utm_term=)

Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340, 51,349 (Oct. 11, 2018)). Allowing a patent owner to take inconsistent claim construction positions detracts from the Patent Office’s goal of “providing greater predictability and certainty in the patent system.” *Revvo Techs.*, IPR2025-00632, Paper 20 at 4–5 (quoting 83 Fed. Reg. at 51, 342–43).

As such, because each of the *Fintiv* factors is either neutral or weighs against discretionary denial, because Petitioner diligently filed this Petition after service of Patent Owner’s infringement contentions, and because this is a PGR proceeding where institution is favored, the PGR should be instituted.

XII. TIMING

Under 37 C.F.R. § 42.202, “[a] petition for a post-grant review of a patent must be filed no later than the date that is nine months after the date of the grant of a patent or of the issuance of a reissue patent.” Petitioner is filing this Petition within nine months of the Reissue Patent’s issue date (September 30, 2025), and this Petition is therefore timely.

XIII. CONCLUSION

For the foregoing reasons, ShoreShade asks that the Board order a post-grant review trial for claims 44, 45, and 47 and then cancel these claims as being unpatentable.

Dated: June 30, 2026

Respectfully submitted by:

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CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), Petitioner hereby certifies, in accordance with and reliance on the word count provided by the word-processing system used to prepare this petition, that the number of words in this paper is 16,675. Pursuant to 37 C.F.R. § 42.24(a), this word count excludes the table of contents, table of authorities, mandatory notices under § 42.8, certificate of service, certificate of word count, appendix of exhibits, and any claim listing.

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Reg. No. 35,218

CERTIFICATE OF SERVICE

I certify that, in accordance with 37 C.F.R. § 42.6(e) and 37 C.F.R. § 42.105, service was made on Patent Owner as detailed below.

Date of Service June 30, 2026

Manner of Service Electronic Service (by agreement)

Documents Served - Petition for Post Grant Review of U.S. Pat. No. RE50606
 - Certificate of Word Count
 - Petitioner's Exhibit List
 - Exhibits Ex. 1001 through Ex. 1032

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Dated: June 30, 2026

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