

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

POPSOCKETS LLC,
Petitioner,

v.

FLYGRIP, INC.,
Patent Owner.

IPR2022-00938
Patent 10,800,024 B2

Before HYUN J. JUNG, BARRY L. GROSSMAN, and
MICHAEL L. WOODS, *Administrative Patent Judges*.

JUNG, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that PopSockets LLC (“Petitioner”) has shown by a preponderance of the evidence that claims 2 and 8 of U.S. Patent No. 10,800,024 B2 (Ex. 1001, “the ’024 patent”) are unpatentable.

A. Background and Summary

Petitioner filed a Petition (Paper 2, “Pet.”) requesting institution of an *inter partes* review of claims 2 and 8 of the ’024 patent. Flygrip, Inc. (“Patent Owner”) filed a Preliminary Response (Paper 7). Pursuant to 35 U.S.C. § 314, we instituted an *inter partes* review of the ’024 patent. Paper 8 (“Inst. Dec.”). In particular, we instituted review of claims 2 and 8 on all presented challenges. Inst. Dec. 2, 49, 50.

After institution, Patent Owner filed a Response (Paper 12, “PO Resp.”), to which Petitioner filed a Reply (Paper 16, “Pet. Reply”), and Patent Owner thereafter filed a Sur-reply (Paper 17, “PO Sur-reply”).

Petitioner also filed a Motion to Strike Exhibits 2027–2035. Paper 20. Patent Owner filed an Opposition to Petitioner’s motion. Paper 21. Patent Owner further filed a Motion to Exclude Evidence. Paper 23. Petitioner filed an Opposition to Patent Owner’s Motion to Exclude Evidence (Paper 24), to which Patent Owner filed a Reply in Support of its Motion (Paper 25).

An oral hearing in this proceeding was held on August 3, 2023; a transcript of the hearing is included in the record. Paper 28 (“Tr.”).

B. Real Parties in Interest

Petitioner identifies PopSockets LLC, Otter Products LLC, and Amazon.com, Inc. as real parties in interest. Pet. 101. Patent Owner only identifies itself as a real party in interest. Paper 5, 2.

C. Related Matters

The parties identify *Otter Products LLC. v. Flygrip, Inc.*, 1:21-cv-03298 (D. Colo.), *PopSockets LLC. v. Flygrip, Inc.*, 1:21-cv-02900 (D. Colo.), *Flygrip, Inc. v. Walmart, Inc.*, 6:21-cv-01082 (W.D. Tex.), *Flygrip, Inc. v. Amazon.com, Inc.*, 6:21-cv-01081 (W.D. Tex.), and *Flygrip, Inc. v. Five Below, Inc.*, 6:21-cv-01080 (W.D. Tex.) as related matters. Pet. 101; Paper 5, 2.

The same claims of the '024 patent are also challenged in IPR2022-00937. *See* Pet. 1; Paper 3.

D. The '024 Patent (Ex. 1001)

The '024 patent issued on October 13, 2020, from an application filed on July 10, 2019, that is a continuation of an application filed on June 21, 2011, that, in turn, is a continuation-in-part of an application filed on October 26, 2010. Ex. 1001, codes (22), (45), (63), 1:6–11. The '024 patent also claims priority to a provisional application filed on August 19, 2010. *Id.* at code (60), 1:11–13.

The '024 patent particularly “relates to a movable grip for holding handheld devices.” Ex. 1001, 1:19–22. The '024 patent “provides a finger grip apparatus for a handheld device” that “allows a user to securely hold a handheld device with a single hand” and “with an increased range of motion compared with gripping the handheld device directly.” *Id.* at 2:13–19.

According to the “Summary of the Invention,” “[t]he apparatus includes a base for affixing the apparatus to a first surface of the handheld

device; at least one extension extending from the base at a first end of the extension; and a grip extending from the at least one extension at a second end of the extension.” Ex. 1001, 2:20–26. In one embodiment, the grip moves “substantially perpendicular” to the base. *Id.* at 2:63–67, 6:3–41, Figs. 18, 19, 20a–c. Figure 20a of the ’024 patent is reproduced below.

FIG. 20a

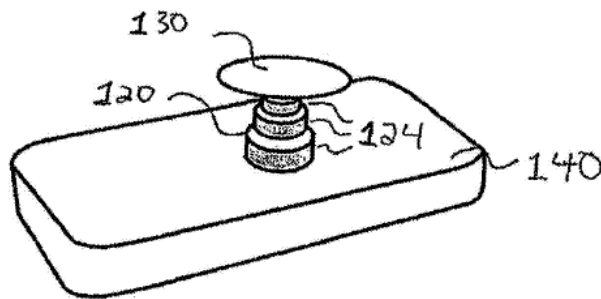


Figure 20a shows an embodiment of a grip device “where a grip of the grip device moves away from a base of the grip device in a path substantially perpendicular to the base” in the extended or open position. *Id.* at 2:63–3:3, 6:3–7.

The grip device includes base 110 to fasten the grip device to handheld device 140, extension 120, and grip 130. Ex. 1001, 4:32–47. “[E]xtension 120 may be formed such that it expands/collapses the grip device from the open position to the closed position, such that the grip 130 moves directly towards the base 110 without rotating.” *Id.* at 6:8–11.

A spring or some other mechanism can be used to open and close the grip device. Ex. 1001, 6:11–13, 6:29–32, Fig. 18. The spring or other mechanism may be positioned between base 110 and grip 130 to hold the

grip device opened or closed. *Id.* at 6:13–16, Fig. 19. If the spring or other mechanism holds the grip device open, then a latch or some other locking mechanism may be used to hold the grip device closed. *Id.* at 6:17–19. If the spring or other mechanism holds the grip device closed, then a locking device or user’s finger can be used to keep the grip device opened. *Id.* at 6:20–28.

“[E]xtension 120 may be constructed as a single piece or a series of telescopic pieces 124 that expand/collapse together as the grip device moves from the open to the closed position” by way of, for example, a spring.

Ex. 1001, 6:35–41, Figs. 20a–c.

E. Challenged Claims

The ’024 patent includes claims 1–8, of which Petitioner challenges claims 2 and 8. The challenged claims are reproduced below with changes from a Certificate of Correction (Ex. 1001, 38–40).¹

2. A collapsing and expanding one hand gripping apparatus fastened to or built into the back of a handheld device or its case consisting essentially of,
 - a one hand gripping apparatus fastened to or built into the back of a handheld device
 - wherein a base is fastened to or built into, the back of the handheld device or its case
 - wherein an extension extends perpendicular from the base consisting essentially of a single piece conical telescoping flexible tubular structure, consisting essentially of a plurality of graduated sections, more flexible between the sections, that flex and/or fold over and into one another, wherein the extension is moveable between a collapsed, closed position and an extended, open position,

¹ Patent Owner’s counsel verified that the claim language shown in Petitioner’s claim listing correctly reflects the language of claims 2 and 8 as revised by the Certificate of Correction. Tr. 43:12–22.

on the opposite end of the extension from the base is a grip, wherein the grip is disc-shaped and mounted perpendicular to the end of the extension and has an outer perimeter that is not in contact with the extension when the one hand gripping apparatus is in an extended or retracted position, wherein the grip is attached to the extension, wherein the grip extends radially past the extension, and

wherein the one hand gripping apparatus in the collapsed position lies flat to the handheld device.

Ex. 1001, 9:6–28.

8. A method of using a collapsing and expanding one hand gripping apparatus and fastening the one hand gripping apparatus to the handheld device or handheld device's case, the method comprising the steps of:

obtaining a collapsing and expanding one hand gripping apparatus as recited in claim 2,

fastening or building the one hand gripping apparatus to the back of a handheld device or back of the handheld device's case in an expanded position perpendicular to the handheld device,

receiving two adjacent non-thumb fingers of a gripping hand inserted between the handheld device and the other end of the one hand gripping apparatus, each received finger straddling the sides of the one hand gripping apparatus, wherein a fingerprint side of the received fingers face the handheld device and are in contact with the one hand gripping apparatus and/or the back of the handheld device or the case of handheld device's case,

wherein a gripping hand's thumb and portion of palm wrap around to the front of the handheld device

wherein a step of a one hand gripping apparatus collapsing is removing the fingers of the gripping hand from the one hand gripping apparatus such that the apparatus lies flat to the handheld device.

Id. at 10:19–40.

F. Asserted Prior Art and Proffered Testimonial Evidence

Petitioner identifies the following references as prior art in the asserted grounds of unpatentability:

Name	Reference	Exhibit
Damon	US 5,011,316, issued Apr. 30, 1991	1024
Zoller	US 7,108,544 B2, issued Sept. 19, 2006	1012
Grinfas	GB 2 316 263 A, published Feb. 18, 1998	1003
Nakai	JP 2002-247169, published Aug. 30, 2002	1004 ²

Pet. 7. Petitioner argues that the references listed above are prior art under § 102(b)³ if the earliest claimed priority date of the '024 patent is applied. *Id.* at 8.

Petitioner also provides a Declaration of Dr. Kimberly Cameron (Ex. 1032) and a Supplemental Declaration of Dr. Kimberly Cameron (Ex. 1034). Patent Owner provides a Declaration of Nathan J. MacDonald. Ex. 2014. A deposition transcript for Mr. MacDonald (Ex. 1035) was filed.

G. Asserted Grounds

Petitioner asserts that claims 2 and 8 are unpatentable on the following grounds:

Claims Challenged	35 U.S.C. §	References/Basis
2, 8	103(a)	Nakai, Grinfas
2, 8	103(a)	Zoller, Grinfas

² A certified translation of Nakai is included in the same exhibit. *See* Ex. 1004, 15–25; *see also id.* at 1 (declaration by translator). In this Decision, we cite to the translated paragraphs and figures.

³ The relevant sections of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (Sept. 16, 2011), took effect on March 16, 2013. Because the '024 patent claims priority to an application filed before that date, our citations to 35 U.S.C. §§ 102 and 103 in this Decision are to their pre-AIA versions. *See also* Pet. 8 n.4 (stating that a “[b]ecause this Petition accepts, *arguendo*, the earliest claimed priority date of the '024 patent, pre-AIA provisions are applied”).

Claims Challenged	35 U.S.C. §	References/Basis
2, 8	103(a)	Damon, Grinfas

Pet. 11.

II. ANALYSIS

A. Petitioner’s Motion to Strike

Petitioner moves to strike Exhibits 2027–2035 because they were filed with Patent Owner’s Sur-reply and do not correspond to a deposition transcript of Petitioner’s declarant, in violation of our Rule 42.23(b) and Consolidated Trial Practice Guide⁴ that states “[t]he sur-reply may not be accompanied by new evidence other than deposition transcripts of the cross-examination of any reply witness.” Paper 20. Petitioner also argues that Patent Owner does not cite to these exhibits. *Id.* at 1.

Patent Owner responds that it “included the exhibits in this proceeding merely to maintain the exhibit numbering for simplicity as to the two proceedings.” Paper 21, 1. Patent Owner also argues that these exhibits “were actually or substantively previously of record.” *Id.* Petitioner did not file a reply.

Exhibits 2027 and 2028 are the grandparent and parent applications, and Exhibit 2029 is the application that issued as the ’024 patent. Exhibits 2030–2032 are Application Data Sheets for these applications, and Exhibits 2033–2035 are the publications of these same applications.

We do not rely on any of these exhibits and, therefore, deny Petitioner’s Motion to Strike as moot.

⁴ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

B. Patent Owner's Motion to Exclude Evidence

Patent Owner moves to exclude Exhibits 1005, 1006, 1013–1023 and 1025–1031 because they are unauthenticated, inaccessible to the interested public, and inadmissible as hearsay. Paper 23, 1. Patent Owner indicates that objections to these exhibits were previously filed. *Id.*; *see also* Paper 25 (citing Paper 10). Patent Owner, as the “moving party,” “has the burden of proof to establish that it is entitled to the requested relief.” 37 C.F.R. § 42.20(c).

The exhibits include articles regarding smartphones (Exs. 1005, 1006, 1013, 1014, 1025–1029), a dictionary definition of “section” (Ex. 1016), dictionary definitions of “flexible” (Exs. 1017–1021), an excerpt about the properties of rubber (Ex. 1022), a video of a “PopSocket Life Hack” (Ex. 1023), and a video and graphs of test grips (Exs. 1030, 1031).

Petitioner responds that Patent Owner does not provide any arguments explaining why these exhibits are unauthenticated, inaccessible to the general public, or inadmissible as hearsay. Paper 24, 1. Petitioner argues that there is no supporting argument or facts for authenticity to be questioned and the documents themselves indicate what they are. *Id.* at 2–3. Petitioner also argues that public availability applies to prior art publications and not evidence regarding the background in the art and knowledge of one of ordinary skill in the art, such as the meaning of claim terms. *Id.* at 3–5. Petitioner further argues that the exhibits and their copyright dates are not being offered for the truth of the matter asserted. *Id.* at 6. Petitioner additionally argues that the exhibits are direct evidence of the background knowledge in the art and the understanding that one of ordinary skill in the art would have as to meanings of particular claim terms. *Id.* at 6–7.

Patent Owner replies that there is no evidence to show that the exhibits would have been available to ordinarily skilled artisans, to describe when and where the exhibits were published, and to verify the exhibits are true and correct copies. Paper 25, 1. Patent Owner also argues that there is no evidence that the exhibits were available publicly, and that the copyright date is insufficient to establish availability. *Id.* at 2–3.

Patent Owner does not identify sufficiently why Exhibits 1005, 1006, 1013–1023 and 1025–1031 are not authentic. Paper 23, 1–2. Patent Owner also does not argue sufficiently why these exhibits must be shown to be accessible to the interested public. *Id.* at 2–4. None of these exhibits are asserted to be a prior art publication or part of Petitioner’s grounds for challenging the claims. *See* Pet. 9–11.

Moreover, Petitioner’s declarant considered Exhibits 1005, 1006, 1013–1023 and 1025–1031, along with others, for the declaration filed with the Petition. Ex. 1025 ¶ 5. These exhibits show the basis for the testimony in the declaration, and an expert may rely on hearsay in forming an opinion under Federal Rules of Evidence 703. To the extent they are hearsay, we would limit their purpose to showing the basis for testimony.

Also, dictionary definitions are routinely considered extrinsic evidence that may shed light on the plain and ordinary meaning of a claim term. *See, e.g., Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed. Cir. 2005) (en banc) (“Within the class of extrinsic evidence, the court has observed that dictionaries . . . can be useful in claim construction.”) (citation omitted). For the reasons explained by Petitioner (Paper 24, 6), the definitions were not offered for the truth of the matter asserted, and, thus, we do not consider these exhibits hearsay.

For the reasons above, Patent Owner does not satisfy its “burden of proof to establish that it is entitled to the requested relief.” 37 C.F.R. § 42.20(c). We also do not rely on any of Exhibits 1005, 1006, 1013–1023 and 1025–1031 to reach our determination. In view of the above, Patent Owner’s Motion to Exclude Exhibits 1005, 1006, 1013–1023 and 1025–1031 is denied.

C. Legal Standards

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent [claim] it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016). This burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail in an *inter partes* review, the petitioner must support its challenges by a preponderance of the evidence. 35 U.S.C. § 316(e) (2018); 37 C.F.R. § 42.1(d) (2021).

Petitioner contends that the challenged claims of the ’024 patent are unpatentable under § 103. Pet. 8, 14–100. A claim is unpatentable under § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). When evaluating a combination of teachings, we must also

“determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

D. Level of Ordinary Skill in the Art

Petitioner asserts that one of ordinary skill in the art “would have had either five years or more of experience in mechanical product design, or a bachelor’s degree in Mechanical Engineering and one year or more of experience in mechanical product design.” Pet. 8 (citing Ex. 1032 ¶¶ 26–27).

Patent Owner responds that one of ordinary skill in the art “would have education and experience in mechanical design” and, for purposes of the Response, would have had a “bachelor’s degree in a technical field and at least 1 year of experience with product development, or a college degree in a non-technical field and at least 3 years of experience in product development.” PO Resp. 11–12 (citing Ex. 2014 ¶ 17). Patent Owner also contends that “[e]levated educational experience could take the place of a certain amount of experience, and vice-versa.” *Id.* at 12 (citing Ex. 2014 ¶ 17).

In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citation and internal quotation marks omitted).

Because Petitioner contends that one of ordinary skill in the art would have had “a bachelor’s degree in Mechanical Engineering and one year or more of experience in mechanical product design” (Pet. 8 citing Ex. 1032

¶¶ 26–27)) and Patent Owner contends that one of ordinary skill in the art would have had a “bachelor’s degree in a technical field and at least 1 year of experience with product development” (PO Resp. 11–12 (citing Ex. 2014 ¶ 17)), the parties substantially agree with respect to these aspects of their proposals for the level of ordinary skill.

Petitioner contends, in the alternative, that the ordinarily skilled artisan would have had “*five years or more* of experience in mechanical product design,” but Patent Owner alternatively contends that the ordinarily skilled artisan would have had “a college degree in a non-technical field and *at least 3 years* of experience in product development.” Pet. 8; PO Resp. 12 (emphases added). Petitioner’s alternate person of ordinary skill in the art requires more years of experience than Patent Owner’s alternate person of ordinary skill in the art. *See* Pet. 8; PO Resp. 12.

In view of the above, we see no reason to disturb our preliminary determination regarding the level of ordinary skill in the art. Thus, we maintain and reaffirm that one of ordinary skill in the art would have had “would have had either five years or more of experience in mechanical product design, or a bachelor’s degree in Mechanical Engineering and one year or more of experience in mechanical product design.” Pet. 8 (citing Ex. 1032 ¶¶ 26–27). Based on the full record and for the reasons below, even if we adopted Patent Owner’s proposed level of ordinary skill, our determination would be the same.

E. Claim Construction

In an *inter partes* review, the claims are construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), including construing the claim 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. § 42.100(b) (2021); *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

1. “conical”

Petitioner does not propose an interpretation for “conical.” *See* Pet. 8–13. We did not need to interpret expressly any term for institution. Inst. Dec. 13.

Patent Owner responds that one of ordinary skill in the art would have interpreted “conical” to have its plain and ordinary meaning, which is “that it pertains to the shape of a cone.” PO Resp. 6 (citing Ex. 2014 ¶ 76). According to Patent Owner, “[t]he term ‘conical’ only shows up in the claims of the ’024, specifically in claim 2.” *Id.*

Patent Owner contrasts a conical shape from a pyramidal shape. PO Resp. 6–7 (citing Ex. 2014 ¶ 77). Patent Owner argues that a pyramidal shape applied to bellows would make such bellows easier to manufacture. *Id.* at 7–8 (citing Ex. 2014 ¶ 78). Patent Owner also argues that a conically shaped bellows would have been more difficult to make at a scale to form a grip for a handheld device. *Id.* at 8–9 (citing Ex. 2014 ¶ 79).

In Patent Owner’s view, a pyramidal-shaped, telescopic bellows arrangement “went against all the rules of design for the small scale required for a phone grip.” PO Resp. 9. Patent Owner contends that one of ordinary skill in the art would have understood “this significant added difficulty,” would not have considered such “bellows would be strong enough” to support a handheld device without extra support, and would have expected that “a compliant telescopic bellows arrangement at the very small scale required to at least appear to be suitable for a gripping arrangement, would

be likely to wear out and begin tearing prematurely due to repeated tight bending and unbending as would be typical of normal use.” *Id.* at 9–10 (citing Ex. 2014 ¶ 80). Patent Owner, thus, contends that one of ordinary skill in the art would have “need[ed] more motivation than being a theoretically possible design choice in order to choose to move forward with a very small bellows that would be extremely difficult to manufacture.” *Id.* at 9 (citing Ex. 2014 ¶ 80).

Petitioner replies that Patent Owner “acknowledges that ‘conical’ (or any variation thereof) only appears once in the ’024 Patent, in claim 2” and agrees that a [person of ordinary skill in the art] would accordingly give the term its plain and ordinary meaning.” Pet. Reply 1 (citing PO Resp. 6; Ex. 1034 ¶ 3). Petitioner argues that Patent Owner limits the term to “cones with circular bases.” *Id.* at 2 (citing Ex. 1034 ¶ 4; Ex. 1036; Ex. 2013 ¶ 76). Petitioner also argues that Patent Owner does not address the Specification and “jump[s] directly to extrinsic evidence completely untethered to the [S]pecification.” *Id.* at 2–3 (citing Ex. 1034 ¶ 7).

Petitioner contends that one of ordinary skill in the art “would understand that ‘conical,’ as used in the ’024 Patent, is not limited to structures with a circular base.” Pet. Reply 3 (Ex. 1034 ¶ 6; Ex. 1037, 30–47). Petitioner cites to portions of the Specification describing the grip or extension 120 and argues that those passages do not limit “conical” to right circular cones. *Id.* (citing Ex. 1001, 6:3–7, 6:35–38, Fig. 9; Ex. 1034 ¶ 8; Ex. 1038, 6). Petitioner also argues that one of ordinary skill in the art would have recognized the benefit of nesting telescoping pieces for deep compression “regardless of whether the structure has a circular base/cross-section.” *Id.* (citing Ex. 1034 ¶ 9).

Petitioner further argues that Grinfas’s conical shape also folds unto itself and has the same functionality as a circular base structure. Pet. Reply 3–4 (citing Ex. 1003, 9:14–15, Figs. 7A, 7B; Ex. 1034 ¶ 10). Petitioner additionally argues that no figure shows a cone tapering to a point or a solid generated by a right triangle, but the figures show telescoping pieces tapering in a stepwise fashion from larger to smaller diameter. *Id.* at 4–5 (citing PO Resp. 6; Ex. 1001, Figs. 20a–20c; Ex. 1034 ¶¶ 11, 12; Ex. 1036; Ex. 2013 ¶ 76).

Petitioner contends that Patent Owner’s extrinsic evidence does not overcome the intrinsic record and indicates that “conical” includes non-circular cones. Pet. Reply 6, 8 (citing Ex. 1034 ¶ 18). Petitioner also contends that dictionary definitions support a broader reading of cone, and that Patent Owner’s definition includes “a solid bounded by a circular or other closed plane base and the surface formed by line segments joining every point of the boundary of the base to a common vertex.” *Id.* at 6–7 (citing Ex. 1039; Ex. 1040; Ex. 1041; Ex. 1047; Ex. 2013 ¶ 76). Petitioner further contends that extrinsic evidence indicates that a pyramidal cone is considered a type of cone. *Id.* at 7–8 (citing Ex. 1034 ¶ 17; Ex. 1042; Ex. 1043; Ex. 1044; Ex. 1049; Ex. 1050)

Petitioner, thus, argues that one of ordinary skill in the art would have interpreted “conical” to “encompass[] tapered structures that allow for greater compression by nesting, regardless of the shape of the base.” Pet. Reply 4 (citing Ex. 1034 ¶ 10), 6 (citing Ex. 1034 ¶ 14; Ex. 1035, 16:22–19:9). In Petitioner’s view, “[t]he Board does not need to explicitly define ‘conical’” and “only needs to determine whether ‘conical’ is limited to structures with a circular base/cross-section, or whether it includes bases of other shapes.” Pet. Reply 2 (citing PO Resp. 6).

Patent Owner replies that Petitioner does not explain why Grin fas is conical and it does not meet Petitioner’s interpretation of “conical.” PO Sur-reply 1. Patent Owner also argues that the “[S]pecification expressly states that the extension may consist of a ‘tube’” and “[t]ubes are cylindrical [with] a circular cross-section.” *Id.* at 1–2 (citing Ex. 1037, 38). Patent Owner further replies that Petitioner’s interpretation “eviscerates any plain meaning of ‘conical’ and would encompass all sorts of shapes ‘that allow for greater compression by nesting, regardless of the shape of the base.’” *Id.* at 2 (citing Pet. Reply 4). Patent Owner additionally argues that the Specification does not describe “decreases in cone diameter at a constant rate.” *Id.* at 4.

In Patent Owner’s view, the claim language “single piece conical telescoping flexible tubular structure” would exclude structures within Petitioner’s interpretation of “conical.” PO Sur-reply 3. Patent Owner also contends that “deep compression” refers to conical springs, which are not tubular. *Id.* (citing Pet. Reply 3; Ex. 1035, 376:10–18). Patent Owner further contends that Petitioner’s view of “conical” would include any device that could be adapted to hold a handheld device. *Id.* (citing Pet. Reply 4).

Patent Owner additionally contends that the cross-sectional shape would affect functionality of the grip and a square cross-section “would limit the angles at which the device could be oriented with respect to the fingers,” unlike a circular cross-section. PO Sur-reply 3–4. Patent Owner also replies that “Petitioner’s examples use the term ‘cone’ because they refer to items that perform functions that were first provided by cones when the item first came into use,” such as traffic cones, even if they are no longer “conical.” *Id.* at 4. Patent Owner, thus, contends that “‘conical’ should not be

construed to encompass every structure ‘that allow for greater compression by nesting, regardless of the shape of the base.’” *Id.* at 5.

Turning first to the language of the claims, as Petitioner argues, “conical” only appears in claim 2. Ex. 1001, 9:14; PO Resp. 6; Pet. Reply 1. The other claims neither recite “conical” nor limit the term. *See* Ex. 1001, 8:85–9:5, 9:29–10:39; *see also id.* at 38–40 (Certificate of Correction).

Turning next to the Specification, it describes that extension 120 “may include a spring and/or telescoping pieces, or other similar mechanisms in order to adjust a distance between the grip 130 and the base 110” (Ex. 1001, 5:15–17), “may be movably connected to the base 110 and grip 130” (*id.* at 5:34–35), may be “rotated such that the grip 130 moves towards the base 110 while facing the base 110” (*id.* at 5:40–41), “may be formed such that it expands/collapses the grip device from the open position to the closed position, such that the grip 130 moves directly towards the base 110 without rotating” (*id.* at 6:8–11), “may include a spring 123” (*id.* at 6:12–13), “may be formed as a slidable bar that slides into a recess” (*id.* at 6:33–34), “may be constructed as a single piece or a series of telescopic pieces 124” (*id.* at 6:36–37), may be “any number of extensions” (*id.* at 6:66), may be “oriented away from the base 130, such as in a direction substantially perpendicular to the base 130” (*id.* at 7:34–35), or “may be a friction hinge and/or a ratcheting hinge” (*id.* at 7:52–53).

As shown above, the Specification does not include the term “conical” or any related word, and one of ordinary skill in the art would not read any of the descriptions regarding the extension as limiting the term “conical.” The Specification, thus, does not limit “conical,” in the manner asserted by Patent Owner, either expressly or implicitly. The parties do not present any

arguments based on the prosecution history of the '024 patent. *See* PO Resp. 6–10; Pet. Reply 1–8; PO Sur-reply 1–5.

Turning to extrinsic evidence, definitions for “cone” include “a solid bounded by a circular or other closed plane base and the surface formed by line segments joining every point of the boundary of the base to a common vertex” (Ex. 1039) and “[i]n a right circular cone, the directrix is a circle” but “need not be a circle” (Ex. 1042). *See also* Ex. 1043; Ex. 1044. The extrinsic evidence indicates that “cone,” and thus the related word “conical,” would not exclude pyramidal shapes.

While we would agree with Patent Owner that “conical” means “that it pertains to the shape of a cone” (PO Resp. 6; Ex. 2014 ¶ 76), that interpretation does not help us resolve the parties’ dispute regarding whether Grinfas teaches or suggests a “conical” structure. We agree with Petitioner that we “do[] not need to explicitly define ‘conical’” and “only need[] to determine whether ‘conical’ is limited to structures with a circular base/cross-section, or whether it includes bases of other shapes” to resolve the parties’ dispute. Pet. Reply 2

In view of the above, based on the full record, we determine that one of ordinary skill in the art would understand that the term “conical” does not exclude cones with a pyramidal shape. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms. . . that are in controversy, and only to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

2. “telescoping”

“[F]or purposes of this Petition only,” Petitioner proposes interpreting “telescoping” to encompass “single-piece structures that extend and

collapse” and “do[] not require separate pieces that slide/move over each other” with support from the Specification, its declaration, and Patent Owner’s apparent interpretation from related litigation. Pet. 9–11 (citing Ex. 1001, 5:15–17, 6:35–41, Fig. 20; Ex. 1009, 91, 102, 103).

Patent Owner responds that “telescoping,” as used in the Specification, is consistent with its plain and ordinary meaning and argues that “compliant telescopic systems . . . have sections of material that pass one another so as to extend or compress the arrangement.” PO Resp. 2–4 (citing Ex. 1003, 4, 9, Figs. 7A–7B; Ex. 2014 ¶¶ 71–73). Patent Owner also argues that references cited during prosecution show example telescopic arrangements that “have sections of material that pass one another to extend or compress the arrangement.” *Id.* at 2–4 (citing Ex. 2014 ¶ 73).

Patent Owner further argues that the “telescoping action happens by allowing the material to flex and fold over itself” and other examples of telescopic arrangements include a conical spring or telescopic spring. PO Resp. 4–6 (citing Ex. 1010, 6; Ex. 2014 ¶ 74). According to Patent Owner, one of ordinary skill in the art would have understood that “telescopic arrangements could be made in a wide variety of ways.” *Id.* at 6 (citing Ex. 2014 ¶ 75).

Petitioner replies that Patent Owner “does not dispute that Grin fas discloses a telescopic arrangement.” Pet. Reply 1 (citing PO Resp. 2). Patent Owner does not provide a reply regarding the interpretation of “telescoping.” *See generally* PO Sur-reply.

We do not need to interpret expressly “telescoping” to resolve the parties’ dispute because, as discussed below, Petitioner shows that its proposed combinations teach or suggest “telescoping,” even under Patent Owner’s view that “telescopic systems . . . have sections of material that

pass one another so as to extend or compress the arrangement” and allow “material to flex and fold over itself.” *Realtime Data*, 912 F.3d at 1375.

3. “flexible”

Petitioner proposes interpreting “flexible” to have its asserted plain and ordinary meaning of “capable of bending or being bent” with citations to the Specification, its declaration, and several dictionary definitions. Pet. 12–13 (citing Ex. 1001, 4:54–64; Ex. 1004; Ex. 1005; Ex. 1006; Ex. 1007; Ex. 1008; Ex. 1025 ¶¶ 28–33).

Patent Owner states that “[w]ithin the context of the challenged patent, [Petitioner’s proposed] definition is appropriate.” PO Resp. 10. Patent Owner also states that “[a]s used in the ’024 [patent] and consistent with the understanding of a [person of ordinary skill in the art], flexible describes a material that is capable of flexing that is, undergoing deformation without permanent deformation” and “within the context of the ’024 [patent], ‘flexible’ has a more narrow scope than ‘bending.’” *Id.* at 10–11 (citing Ex. 1001, 4:54–64, 7:19–23; Ex. 2014 ¶¶ 81, 82).

Patent Owner argues that “[t]he plain and ordinary meaning of ‘bending’ incorporates non-permanent deformations as well as permanent deformations.” PO Resp. 11 (citing Ex. 2014 ¶ 82). According to Patent Owner, “[w]ithin the context of the ’024 [patent], flexible is not consistent with bending so as to create permanent deformation” and “a more appropriate construction for ‘flexible’ would be, ‘capable of bending repeatedly’ which is consistent with the plain and ordinary meaning of the word.” *Id.* at 14 (citing Ex. 2014 ¶ 83).

Petitioner replies that Patent Owner agrees with its interpretation. Pet. Reply 3 (citing PO Resp. 10–11; Ex. 1032 ¶ 82). According to Petitioner, “no issues presented require determining whether a ‘flexible’ device must be

capable of bending repeatedly.” *Id.* Patent Owner does provide a reply regarding the interpretation of “flexible.” *See generally* PO Sur-reply.

Based on the full record, we determine that “flexible” does not require express interpretation to resolve the parties’ dispute. *Realtime Data*, 912 F.3d at 1375.

4. *Other Terms*

Petitioner also proposes interpreting “a step of a one hand gripping apparatus collapsing is removing the fingers of the gripping hand from the one hand gripping apparatus such that the one hand gripping apparatus lies flat to the handheld device” to mean that “a user removes the fingers of the gripping hand from the one hand gripping apparatus so as not to block or otherwise inhibit the one hand gripping apparatus from being collapsed to the handheld device” based on Patent Owner’s apparent interpretation in related litigation. Pet. 12–13 (citing Ex. 1009, 111–112). Patent Owner does not provide a response and does not provide an interpretation for the above-quoted step of claim 8. *See generally* PO Resp.

Based on the full record, we determine that no other terms require express interpretation. *Realtime Data*, 912 F.3d at 1375.

F. *Asserted Obviousness Based on Nakai and Grinfas*

1. *Nakai (Ex. 1004)*

Nakai provides portable telephone 1 with finger-engaging member 2 protruding from a lower part of a back-surface part 11 of portable telephone 1. Ex. 1004, code (57), ¶¶ 7, 14. Figures 1–3 of Nakai are reproduced below.

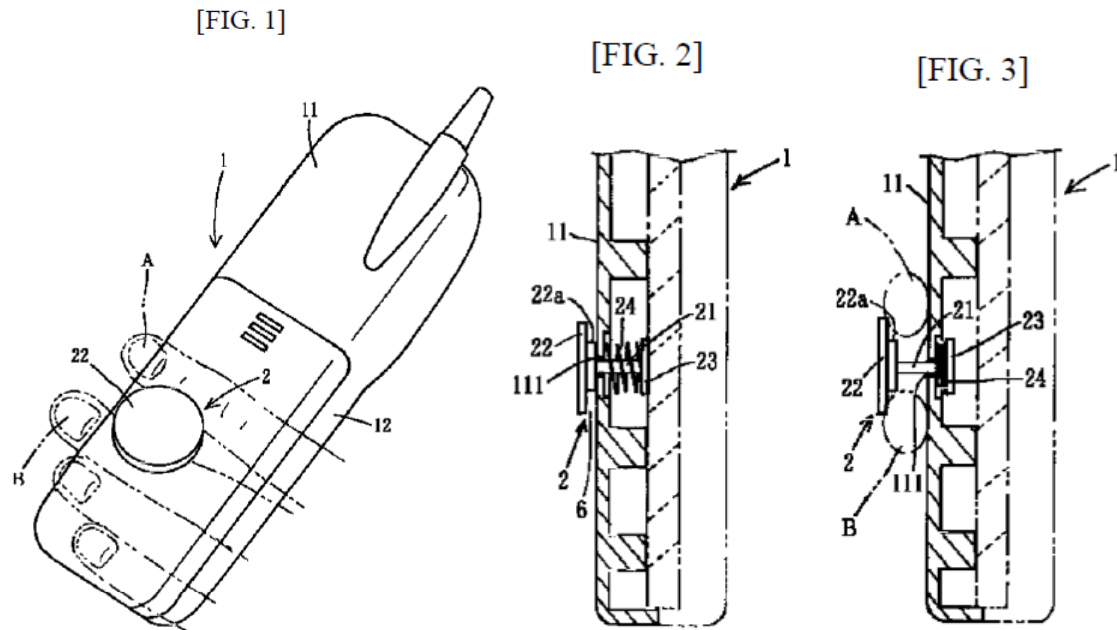


Figure 1 is a perspective view of a back surface of Nakai's portable telephone, and Figures 2 and 3 are partial cross-sectional views of the same portable telephone. Ex. 1004 ¶¶ 14, 18. “[F]inger-engaging member 2, which can be engaged by fingers, is provided protruding from the lower part of the back surface part 11 of the portable telephone 1.” *Id.* ¶ 14. Finger-engaging member 2 includes finger-engaging part 22 and shaft 21. *Id.* ¶ 15. Finger-engaging part 22 has a “disc shape,” and an end of shaft 21 is fixed to a central part of finger-engaging part 22. *Id.* ¶¶ 9, 15.

Shaft 21 can move into and out of shaft insertion hole 111 provided on back surface part 11. Ex. 1004 ¶ 15. At the other end of shaft 21 is spring holder 23. *Id.* Between spring holder 23 and an inside surface of back surface part 11 is spring 24 that compels finger-engaging part 22 towards back surface part 11. *Id.* ¶¶ 9, 15, 17. Inner surface plate part 22a provides gap 6 to allow finger-engaging part 22 to be moved away from back surface part 11 when two fingers are inserted into gap 6 around shaft 21. *Id.* ¶¶ 9, 16–18. The two fingers can stably support the portable

telephone to prevent accidentally dropping the telephone and to allow the thumb to operate buttons on the front of the telephone. *Id.* ¶¶ 11, 18, 20, Fig. 4.

2. *Grinfas (Ex. 1003)*

Grinfas “relates to improvements in the safety of mobile radio communication equipment such as portable hand-held cellular telephones and accessories therefor.” Ex. 1003, 1:4–7. Figure 2 of Grinfas is reproduced below.

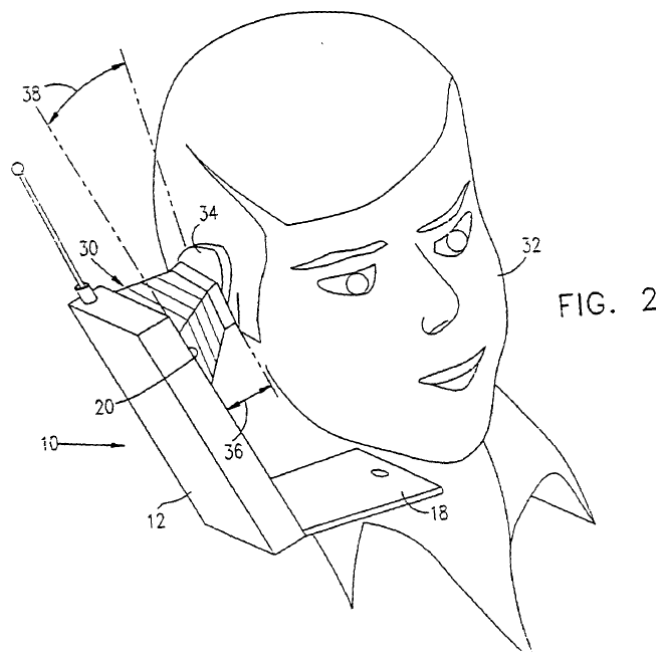
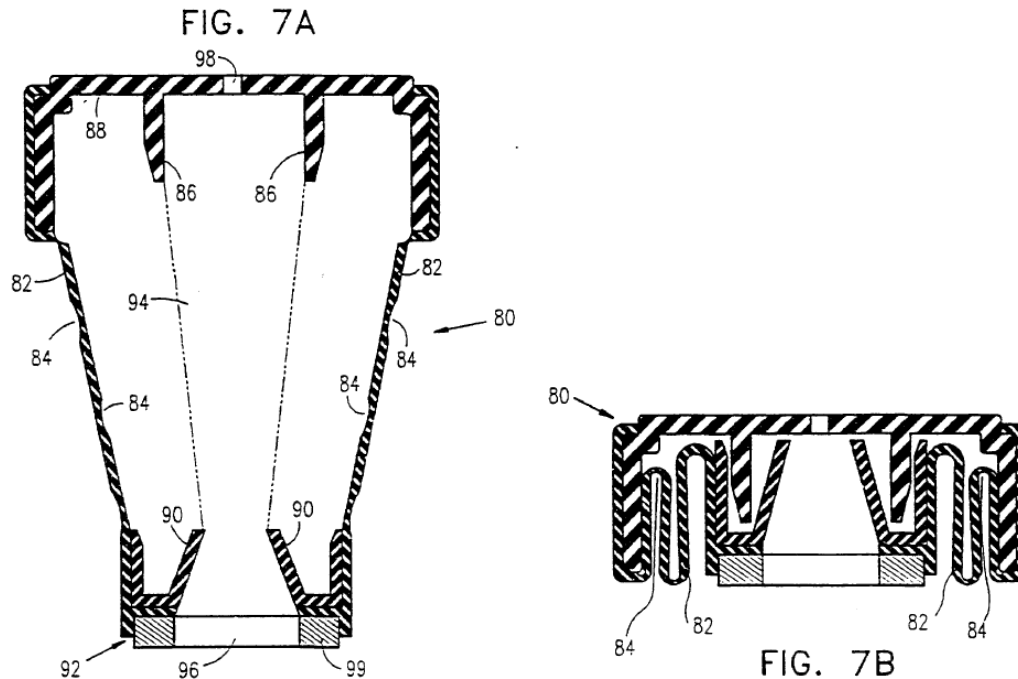


Figure 2 shows a cellular telephone with a “collapsible sound conduit in an extended, operational state.” Ex. 1003, 4:9–11. Cellular telephone 10 includes collapsible sound conduit 30 associated with earpiece 20. *Id.* at 7:8–9. Collapsible sound conduit 30 can be integrally formed with body 12 of cellular telephone 10, integrally formed with a case for telephone 10, or made to be attachable to telephone 10. *Id.* at 7:9–16. When extended and in use, collapsible sound conduit 30 spaces ear 34 of user 32 by distance 26 to reduce the amount of radiation impinging the user’s head while maintaining

an acceptable level of hearing. *Id.* at code (57), 7:21–8:2. “The collapsible sound conduit 30 may be of various forms.” *Id.* at code (57). Figures 7A and 7B of Grinfas are reproduced below.



Figures 7A and 7B are sectional views of a resilient collapsible sound conduit in, respectively, extended and collapsed states. Ex. 1003, 5:4–7, 9:9–10. Collapsible sound conduit 80 includes resilient portion 82 that “is collapsible and foldable into itself.” *Id.* at 9:13–15. “Resilient portion 82 may include recesses 84 that increase the foldability of collapsible sound conduit 80.” *Id.* at 9:21–23.

Collapsible sound conduit 80 may also include stiffeners 86, 90 that protrude from user listening portion 88 and telephone attachment portion 90. Ex. 1003, 9:24–27. Stiffeners 86, 90 define acoustical path 94 between apertures 96, 98. *Id.* at 10:1–4.

3. *Claim 2*

- a) *“A collapsing and expanding one hand gripping apparatus fastened to or built into the back of a handheld device or its case consisting essentially of,”*

Petitioner argues that, if the preamble is considered limiting, Nakai teaches such an apparatus fixed to the back of its phone. Pet. 29–31 (citing Ex. 1004, Abstract, ¶¶ 9, 11, 18, Figs. 1, 3, 4; Ex. 1032 ¶¶ 69–72); *see also id.* at vii (labeling the preamble “2(pre)”).

Petitioner cites portions of Nakai that describe and show “finger-engaging member 2 which can be engaged by fingers is provided protruding from the lower part of the back surface part 11 of the portable telephone 1.” Ex. 1004, Abstract, Figs. 1, 3, 4. We credit Petitioner’s testimonial evidence regarding the preamble because the cited portions of the record support it. Ex. 1032 ¶¶ 69–72. Patent Owner does not provide a responsive argument regarding the preamble of claim 2. *See* PO Resp. 16–44.

Based on the full record, Petitioner persuades us, and we find, that Nakai teaches or suggests the preamble, to the extent it is limiting.

- b) *“a one hand gripping apparatus fastened to or built into the back of a handheld device wherein,”*

Petitioner refers to its arguments for the preamble to argue that Nakai teaches the required “one hand gripping apparatus.” Pet. 31 (citing Ex. 1032 ¶ 73); *see also id.* at vii (labeling the limitation “2(a)”).

Petitioner cites portions of Nakai that describe and show “finger-engaging member 2 . . . is provided protruding from the lower part of the back surface part 11 of the portable telephone 1.” Ex. 1004, Abstract, Figs. 1, 3, 4.

(1) Patent Owner's Response

Patent Owner responds that Grinfas discloses a sound conduit located on the front side of a phone. PO Resp. 24 (citing Ex. 1003, Figs. 2, 3, 4A, 4B, 5, 6), 47 (citing Ex. 2014 ¶ 120). Patent Owner contends that “[c]laim 2 expressly requires that the base of the ‘one hand gripping apparatus’ is ‘fastened to or built into, the back of the handheld device or its case.’” *Id.* at 24.

(2) Reply Arguments

Petitioner replies that it “relies on Nakai for disclosure of a secure gripping apparatus attached to the back of a handheld device” and Grinfas describes a secure grip able to attach to the front or back of a handheld device. Pet. Reply 16 (citing Pet. 29–31; PO Resp. 24–25; Ex. 1034 ¶ 39; Ex. 1035, 190:187–192:24; Ex. 1037, 63–68).

Patent Owner replies that “the patent at issue *requires* placement on the back of the handheld device, e.g., ‘fastened or built into the back of a handheld device’” and “Grinfas discloses a sound conduit used on the front of a device, while the present invention *requires* use on the back side.” PO Sur-reply 11 (citing Pet. Reply 16; Ex. 1037, 5, 63–68).

(3) Petitioner Shows that the Proposed Combination Meets the Limitation

As discussed above, Petitioner relies on Nakai for describing and showing “finger-engaging member 2 . . . provided protruding from the lower part of the back surface part 11 of the portable telephone 1.” Ex. 1004, Abstract, Figs. 1, 3, 4. We credit Petitioner’s testimonial evidence regarding the above-quoted limitation because the cited portions of the record support it. Ex. 1032 ¶ 73.

Petitioner's reliance on Nakai for the limitation is confirmed by its proposed combination. *See* Pet. 19–29. For example, Petitioner argues that one of ordinary skill in the art would have made the proposed combination “by simple replacement of Nakai's shaft 21 and spring 23 with resilient portion 82 of Grinfas's collapsible conduit 80, and attachment of the base of Grinfas's resilient portion 82 to the bottom of Nakai's cavity.” Pet. 23–24 (citing Ex. 1032 ¶¶ 54, 55).

Petitioner, thus, proposes attaching Grinfas's conduit 80 to Nakai's cavity. *See* Pet. 19–29. Nakai shows that the cavity is in the back of its portable telephone 1. Ex. 1004, Figs. 2, 3; *see also* Pet. 19–20 (describing the cavity and providing annotated Figs. 2, 3 from Nakai).

Based on the full record, Petitioner persuades us, and we determine, that the proposed combination teaches, suggests, and would have rendered obvious “a one hand gripping apparatus fastened to or built into the back of a handheld device.”

c) “a base is fastened to or built into, the back of the handheld device or its case wherein,”

Petitioner argues that spring holder 23 and base end of shaft 21 of Nakai teach a base. Pet. 31; *see also id.* at vii (labeling the limitation “2(b)”). Petitioner also argues that Grinfas teaches attachment portion 92 that would be understood to be the base of claim 2. *Id.* (citing Ex. 1003, 10:6). Petitioner further argues that, in the proposed combination, an end of Grinfas's resilient portion 82 opposite Nakai's finger-engaging part 22 would be fastened to the bottom of Nakai's cavity, or it would have been obvious to fasten resilient portion 82 to the cavity. *Id.* (citing Ex. 1032 ¶ 74).

Nakai describes that finger-engaging part 22 includes spring holder 23 at an end of shaft 21, and spring holder 23 is shown within the lower part of portable telephone 1. Ex. 1004 ¶ 15, Figs. 2, 3. Petitioner cites portions of Grinfas that describe and show telephone attachment portion 92 “for attachment to a telephone.” Ex. 1003, 10:6, Figs. 7A, 7B.

We credit Petitioner’s testimonial evidence that one of ordinary skill in the art would have understood that attachment portion 92 of Grinfas would be a base within the meaning of claim 2 and attached to Nakai in the proposed combination because the cited portions of the record support it. Ex. 1032 ¶ 74 (citing Ex. 1003, 1:28–2:4, 8:6–8, 10:6). Patent Owner does not provide a responsive argument regarding this limitation of claim 2. *See* PO Resp. 16–44.

Based on the full record, Petitioner persuades us, and we determine, that the proposed combination teaches, suggests, and would have rendered obvious “a base is fastened to or built into, the back of the handheld device or its case.”

- d) *“an extension extends perpendicular from the base consisting essentially of a single piece conical telescoping flexible tubular structure, consisting essentially of a plurality of graduated sections, more flexible between the sections, that flex and/or fold over and into one another, wherein the extension is moveable between a collapsed, closed position and an extended, open position,”*

Petitioner argues that, in its proposed combination, Grinfas’s resilient portion 82 replaces Nakai’s shaft 21 and spring 24 and the distal end of resilient portion 82 attaches to finger-engaging part 22 and the proximal end forms a base attaching to the mobile device. Pet. 31–32; *see also id.* at vii (labeling the limitation “2(c)”).

Petitioner also argues that one of ordinary skill in the art would have understood that Grinfas's resilient portion 82 teaches "a single piece conical telescoping flexible tubular structure" because resilient portion 82 is conical, tubular, and flexible. Pet. 32 (citing Ex. 1032 ¶ 77). In Petitioner's view, resilient portion 82 is "flexible" under its proposed interpretation from the related proceeding. *Id.* at 34 (citing Ex. 1001, 4:54–64; Ex. 1032 ¶¶ 80–83). Petitioner further argues that resilient portion 82 is "telescoping" under its proposed interpretation based on Patent Owner's infringement theory from related litigation. *Id.* (citing Ex. 1032 ¶ 77).

Regarding an extension that "consist[s] essentially of a plurality of graduated sections, more flexible between the sections, that flex and/or fold over and into one another," Petitioner argues that resilient portion 82 has "a plurality of graduated sections," and that one of ordinary skill in the art would have understood that resilient portion 82 is "more flexible between the sections" so as to move between closed and open positions. Pet. 32–33 (citing Ex. 1003, 9:15–18, 9:22, Fig. 7A, Ex. 1032 ¶ 77), 34–35 (citing Ex. 1003, Fig. 7B; Ex. 1032 ¶¶ 80–83). According to Petitioner, one of ordinary skill in the art would have understood that resilient portion 82 has graduated sections due to recesses 84. *Id.* at 33–34 (citing Ex. 1003, 9:14–15, 9:22, Fig. 7A; Ex. 1032 ¶¶ 78, 79). Petitioner further contends that resilient portion 82 "is collapsible and foldable into itself" because of recesses 84. *Id.* at 33 (citing Ex. 1003, 9:14–15, 9:21–23, Fig. 7B).

(1) Patent Owner's Response

Patent Owner responds that Grinfas does not teach a "conical" extension but a rectangular one and "there is much more than a trivial difference between a pyramidally shaped telescopic bellows arrangement (such as Grinfas discloses) and a conical telescopic bellows arrangement on

the small scale that is required to make a grip.” PO Resp. 36–38 (citing Ex. 1003, 4, 5, Figs. 7A, 7B; Ex. 1032, 48; Ex. 2014 ¶¶ 89, 90, 112), 47 (citing Ex. 2014 ¶ 120). Patent Owner also responds that Grinfas does not teach a “conical” extension because it has “edges on the side,” “rectangular base,” and a non-circular cross-section. *Id.* at 38–39.

(2) Reply Arguments

Petitioner replies that Patent Owner’s interpretation of “conical” is too narrow, unsupported, and reads in additional limitations. Pet. Reply 18 (citing PO Resp. 38–39). Petitioner also argues that a pyramidal extension is not substantially distinct from the claimed extension. *Id.* (citing Ex. 1003, Figs. 9–12; Ex. 1034 ¶¶ 45–46).

Patent Owner replies that the proposed combination does not satisfy the “conical” limitation, and Petitioner’s interpretation of “conical” “strips most of the meaning from the term.” PO Sur-reply 14 (citing PO Resp. 38–42; Pet. Reply 18), 18 (citing PO Resp. 47; Ex. 2014 ¶ 120). Patent Owner also argues that “Petitioner has not established the equivalency of an extension with a square cross-section” and that “a square cross-section would limit the angles at which a user could hold the extension between the user’s non-thumb fingers.” *Id.*

(3) Petitioner Shows that the Proposed Combination Meets the Limitation

Petitioner cites portions of Grinfas that describe “sound conduit 80 preferably includ[ing] a resilient portion 82” that “is collapsible and foldable into itself” and “may be made of any elastomeric material . . . so that collapsible sound conduit 80 has sufficient stiffness or hardness when fully extended.” Ex. 1003, 9:13–18, Fig. 7B. Other cited portions describe that

“[r]esilient portion 82 may include recesses 84 that increase the foldability of collapsible sound conduit 80.” *Id.* at 9:21–23, Fig. 7A.

We credit Petitioner’s testimonial evidence that one of ordinary skill in the art would have understood that Grinfas’s resilient portion 82 is “a single piece . . . structure,” because Grinfas describes and shows it is a single-piece structure. Ex. 1003, Figs. 7A, 7B; Ex. 1032 ¶ 77.

For the reasons stated above, we determine that determine that one of ordinary skill in the art would understand that the term “conical” does not exclude cones with a pyramidal shape. We also credit Petitioner’s testimonial evidence that one of ordinary skill in the art would have understood that Grinfas’s resilient portion 82 is a “conical . . . structure,” because Grinfas shows a “conical” structure within the scope that we determine the full record supports. Ex. 1003, Figs. 7A, 7B; Ex. 1032 ¶ 77. Patent Owner does not dispute that Grinfas describes a conical structure under Petitioner’s understanding of the term as evidenced by its application of Grinfas.

Patent Owner states that “telescoping,” as used in the Specification, is consistent with its plain and ordinary meaning and argues that “compliant telescopic systems . . . have sections of material that pass one another so as to extend or compress the arrangement.” PO Resp. 2–4 (citing Ex. 1003, 4, 9, Figs. 7A–7B; Ex. 2014 ¶¶ 71–73). Patent Owner also states that the “telescoping action happens by allowing the material to flex and fold over itself.” *Id.* at 4–6 (citing Ex. 1010, 6; Ex. 2014 ¶ 74). As discussed above, Petitioner cites a portion of Grinfas that describes “sound conduit 80 preferably includes a resilient portion 82” that “is collapsible and foldable into itself.” Ex. 1003, 9:13–15, Fig. 7B; Ex. 1032 ¶ 78.

Petitioner proposes interpreting “flexible” to mean “capable of bending or being bent.” Pet. 12–13. Patent Owner also states that “[w]ithin the context of the challenged patent, [Petitioner’s proposed] definition [of ‘flexible’] is appropriate.” PO Resp. 10. Petitioner cites a portion of Grinfas that describes “[r]esilient portion 82 may include recesses 84 that increase the foldability of collapsible sound conduit 80.” Ex. 1003, 9:21–23, Fig. 7A; Ex. 1032 ¶¶ 80–82.

Regarding a structure “consisting essentially of a plurality of graduated sections, more flexible between the sections,” Petitioner relies on resilient portion 82 of Grinfas that includes recesses 82. Pet. 32–34. We credit Petitioner’s testimonial evidence regarding this limitation because Grinfas supports it. Ex. 1003, 9:14–15, 9:22, Figs. 7A, 7B; Ex. 1032 ¶ 78 (citing Ex. 1003, 9:14–15, 9:22, Fig. 7A), ¶ 79 (citing Ex. 1003, Fig. 7A), ¶ 83 (citing Ex. 1003, Fig. 7B).

As for sections “that flex and/or fold over and into one another,” Petitioner relies on resilient portion 82 of Grinfas that includes recesses 82. Pet. 32–34. We credit Petitioner’s testimonial evidence regarding this limitation because Grinfas supports it. Ex. 1003, 9:14–15, 9:22, Figs. 7A, 7B; Ex. 1032 ¶ 78 (citing Ex. 1003, 9:14–15, 9:22, Fig. 7A), ¶ 83 (citing Ex. 1003, Fig. 7B).

In Petitioner’s proposed combination, Nakai as modified with resilient portion 82 would have resilient portion 82 extending perpendicularly in the same manner as Nakai’s finger-engaging member 2. Pet. 24 (figure showing “Nakai-Grinfas Combined (Extended)”), Ex. 1002, Figs. 2, 3. Patent Owner does not dispute that, in the proposed combination, sound conduit 80 would extend perpendicularly from the base. *See* PO Resp. 16–48.

In Petitioner’s proposed combination, Nakai as modified with resilient portion 82 would have resilient portion 82 moving between a collapsed, closed position and an extended, open position.” Pet. 24 (figure showing “Nakai-Grinfas Combined (Extended)”), 27 (figure showing “Nakai-Grinfas Combined Figure (Collapsed)”). Patent Owner does not dispute that, in the proposed combination, sound conduit 80 “is moveable between a collapsed, closed position and an extended, open position.” See PO Resp. 16–48.

For the reasons above, based on the full record before us, Petitioner persuades us, and we determine, that the proposed combination teaches, suggests, and would have rendered obvious the recited “extension.”

- e) *“on the opposite end of the extension from the base is a grip, wherein the grip is disc-shaped and mounted perpendicular to the end of the extension and has an outer perimeter that is not in contact with the extension when the one hand gripping apparatus is in an extended or retracted position, wherein the grip is attached to the extension, wherein the grip extends radially past the extension, and wherein,”*

Petitioner argues that Nakai teaches finger-engaging part 22 with a “disc shape” and attached to shaft 21 perpendicularly. Pet. 35–36 (citing Ex. 1004 ¶¶ 16, 17, 21, Figs. 2, 3, 5, 6; Ex. 1032 ¶ 86); *see also id.* at vii (labeling the limitation “2(d)”). Petitioner also argues that finger-engaging part 22 is depicted and described as “ha[ving] an outer perimeter that is not in contact with the extension when the one hand gripping apparatus is in an extended or retracted position” and “the grip extends radially past the extension.” *Id.* at 37 (citing Ex. 1004 ¶ 17; Ex. 1032 ¶ 87); *see also id.* at vii (labeling the limitation “2(d)”). Petitioner further argues that finger-engaging part 22 would still meet the limitations quoted above in the proposed combination of Nakai and Grinfas. *Id.* at 37–38 (citing Ex. 1003, Fig. 7A; Ex. 1004, Figs. 8, 9; Ex. 1032 ¶¶ 88–89).

(1) Patent Owner's Response

Patent Owner responds that the proposed combination would not meet “an outer perimeter that is not in contact with the extension when the one hand gripping apparatus is in an extended or retracted position” because “the disc-shaped grip does not extend radially past the extension in the collapsed state.” PO Resp. 42–44 (citing Pet. 28; Ex. 2014 ¶¶ 114–116), 47 (citing Ex. 2014 ¶ 120).

(2) Reply Arguments

Petitioner replies that Patent Owner relies on an exemplary combined figure, and that a figure showing the grip in the extended position shows the limitation, which is not disputed by Patent Owner. Pet. Reply 19–20 (citing Pet. 24; PO Resp. 42–43; Ex. 1034 ¶ 50). Petitioner argues that the claim requires that “the grip’s outer perimeter not be in contact with the extension when the gripping apparatus is ‘in an extended or retracted position.’” *Id.* at 20. Petitioner also argues that Grinfas describes a conduit with a narrower base and folding the walls of that conduit over and into one another to fold the conduit into itself. *Id.* at 20–21 (citing Ex. 1003, Figs. 7A, 7B; Ex. 1034 ¶ 52; Ex. 1043 ¶ 53). Petitioner contends that it would result in “an outer perimeter that is not in contact with the extension” in both extended and retracted positions. *Id.* at 21–22 (citing Ex. 1043 ¶ 53).

Patent Owner replies that Petitioner fails to show the “outer perimeter” limitation and “fails to credibly cite to any alternative possible embodiment.” PO Sur-reply 16 (citing PO Resp. 47; Ex. 1034 ¶¶ 50–51; Ex. 2014 ¶ 120). Patent Owner also argues that “[t]he claim element is a negative limitation” and “the grip’s outer perimeter cannot be in contact with the extension when extended, **and also** when retracted.” *Id.* Patent Owner further argues that Petitioner incorrectly contends that folding Grinfas’s

walls would not result in radially extending past the upper grip, because the outer perimeter is in contact with the extension. *Id.* at 17 (citing Pet. Reply 21; Ex. 1003, Fig. 7B).

(3) Petitioner Shows that the Proposed Combination Meets the Limitation

Petitioner cites portions of Nakai that describe finger-engaging member 2 includes finger-engaging part 27 with a round shape at an end of shaft 26. Ex. 1004 ¶¶ 17, 21, Figs. 2, 3, 5, 6. We credit Petitioner’s testimonial evidence that one of ordinary skill in the art would have understood that finger-engaging part 22 constitutes a grip and has a diameter greater than shaft 21 so that the outer perimeter of finger-engaging part 22 is not in contact with shaft 21 and extends radially past shaft 21, because the cited portions of the record support it. Ex. 1003 ¶¶ 17, Figs. 2, 3, 5, 6; Ex. 1032 ¶¶ 86, 87.

In Petitioner’s proposed combination, Nakai as modified with resilient portion 82 would have the asserted grip at an end of resilient portion 82. Pet. 38 (figure showing “Nakai-Grinfas Combined (Extended)”). Petitioner argues that the outer perimeter of Nakai’s grip extends radially past its shaft 21 in the extended and collapsed positions. *Id.* at 37 (citing Ex. 1032 ¶ 87).

Petitioner also argues that, “[i]n the Nakai-Grinfas combination, Nakai’s grip continues to extend radially past Grinfas’s extension (resilient portion 82), with the grip’s outer perimeter not contacting the extension (resilient portion 82) in either extended or collapsed positions.” Pet. 38 (citing Ex. 1032 ¶¶ 88–89). We credit Petitioner’s cited testimonial evidence because the cited parts of the record support it. Ex. 1003, Fig. 7A; Ex. 1004 ¶ 17, Figs. 3, 8, 9; Ex. 1032 ¶¶ 88–89. We agree that

Nakai already discloses that the unmodified extension (i.e., shaft 21) has a smaller diameter than the grip (finger-engaging part 22), and doing so would have preserved Nakai's teaching of a user stably holding a mobile phone by sandwiching fingers between the grip (finger-engaging part 22) and the back of the mobile phone along the sides of the extension.

Ex. 1032 ¶ 89.

Petitioner's proposed combination, thus, would have a grip "that is not in contact with the extension when the one hand gripping apparatus is in an extended or retracted position." Patent Owner only points us to a figure on page 28 of the Petition and does not address the above-summarized argument and supporting testimonial evidence. *See* PO Resp. 42–44 (citing Pet. 28; Ex. 2014 ¶¶ 114–116), 47 (citing Ex. 2014 ¶ 120).

Based on the full record before us, Petitioner persuades us, and we determine, that Petitioner's proposed combination teaches, suggests, or would have rendered obvious the above-quoted elements, functions, and limitations.

f) *"the one hand gripping apparatus in the collapsed position lies flat to the handheld device."*

Petitioner argues that Nakai teaches the limitation and the proposed combination with Grinfas would also collapse in the manner recited. Pet. 38 (citing Ex. 1004 ¶¶ 17, 18, Figs. 2, 3, 5, 6); *see also id.* at vii (labeling the limitation "2(e)"). Petitioner also argues that one of ordinary skill in the art would have combined Nakai and Grinfas so that the collapsed structure would be flush with the back surface in accordance with Nakai's teachings, and it would have been "straightforward in the proposed combination" as "a matter of routine engineering" to do so. *Id.* at 38–40 (citing Ex. 1003, Fig. 7B; Ex. 1004 ¶¶ 15, 38, 50, Figs. 12–15; Ex. 1032 ¶¶ 92, 93).

Petitioner cites portions of Nakai that describe “inner surface plate part 22a of the finger-engaging part 22 contacts the outer surface of the back surface part 11 of the portable telephone 1.” Ex. 1004 ¶ 17, Figs. 2, 5. We credit Petitioner’s testimonial evidence that one of ordinary skill in the art would have made the combination so that it would “be flush with the back surface of the handheld device when collapsed, as Nakai already expressly teaches, in order to provide maximum compactness” and finger-engaging part 22 would be received in an opening because the cited portions of the record support it. Ex. 1032 ¶ 92 (citing Ex. 1004 ¶¶ 38, 50), ¶ 93 (citing Ex. 1003, Fig. 7B; Ex. 1004 ¶¶ 15, 50, Figs. 8, 9, 12–15).

Patent Owner does not provide a responsive argument regarding this limitation. *See* PO Resp. 16–44. Based on the full record, Petitioner persuades us, and we determine, that the proposed combination teaches, suggests, and would have rendered obvious “one hand gripping apparatus in the collapsed position lies flat to the handheld device.”

g) Petitioner’s Asserted Motivation to Combine

Petitioner argues that Nakai and Grinfas are analogous art (Pet. 19 (citing Ex. 1003, 1:12–17; Ex. 1004, Abstract; Ex. 1032 ¶ 44)), and that one of ordinary skill in the art would have been motivated to minimize the cavity size in Nakai “in order to reduce the need for the cell phone (or other device) to be specially manufactured to be compatible with Nakai’s apparatus, which in turn would improve the commercial prospects for Nakai’s apparatus” (Pet. 19–20 (citing Ex. 1004, Abstract, ¶¶ 4, 5, 15, Figs. 2, 3; Ex. 1032 ¶¶ 45–47)). *See also id.* at 29 (citing Ex. 1032 ¶¶ 44–68). Petitioner also argues that one of ordinary skill in the art would have been motivated to modify Nakai so that the handheld device’s thickness would not limit the extended height of Nakai’s apparatus so that it could function as a stand or

cord-management system and accept larger-sized fingers. *Id.* at 20–21 (citing Ex. 1032 ¶¶ 48, 49).

Petitioner additionally argues that Nakai’s apparatus can be applied to a case for the handheld device, but the case would have to be thicker, which would have been undesirable in the mobile phone industry. Pet. 22 (citing Ex. 1004 ¶¶ 60, 67, Figs. 24, 26, 27; Ex. 1032 ¶ 52). Petitioner further argues that one of ordinary skill in the art would not have regarded Nakai’s other embodiments, such as the ones using a rubber or spring-biased pivoting, to be viable because they are not suited for larger electrical devices or they increase cost and complexity. *Id.* at 21–22 (citing Ex. 1032 ¶¶ 51, 52).

Petitioner, thus, contends that one of ordinary skill in the art would have been motivated to search for other approaches to minimize Nakai’s apparatus and would have been motivated to modify Nakai to incorporate Grinfas’s flexible collapsible extension because the “combination would minimize the size of the cavity need to accommodate Nakai’s finger-engaging member 2 in collapsed position” and the fully extended height would be higher for the given cavity depth. Pet. 22–23 (citing Ex. 1032 ¶¶ 53, 54).

Petition also contends that the proposed combination can be achieved by replacing Nakai’s shaft 21 and spring 24 with Grinfas’s resilient portion 82. Pet. 24 (citing Ex. 1032 ¶ 55). Petitioner further contends that “it would have been a matter of routine engineering to resize the diameter of Nakai’s shaft insertion hole 111 to accommodate Grinfas’s extension and Nakai’s finger-engaging part 22” and “to achieve a flush state in the collapsed position.” *Id.* at 24–25 (citing Ex. 1032 ¶ 56).

According to Petitioner, one of ordinary skill in the art would have been motivated to make the combination because it would reduce the depth of the cavity, lessen the need to displace internal components of the handheld device, allow for thinner devices, and improve the apparatus's ergonomics and functionality. Pet. 25 (citing Ex. 1032 ¶¶ 48–49, 57–58). Petitioner argues that these benefits result from the required cavity depth being significantly less with Grinfas's extension. *Id.* (citing Ex. 1032 ¶¶ 57–58).

Petitioner argues that the proposed combination would not include Grinfas's listening portion 88 and stiffeners 86, 90 because they are directed to acoustical properties and omitting those would make the proposed combination more compact. Pet. 25–26 (citing Ex. 1003, Figs. 7A, 7B). Petitioner contends that the proposed combination would only incorporate resilient portion 82. *Id.* at 26 (citing Ex. 1032 ¶ 59).

Petitioner also argues that one of ordinary skill in the art would have recognized that resilient portion 82 can be a substitute for Nakai's shaft and spring because Grinfas teaches that its collapsible apparatus "has sufficient stiffness or hardness when fully extended" and "is collapsible and foldable into itself." Pet. 26–27 (citing Ex. 1003, 9:14–18; Ex. 1032 ¶ 60). In Petitioner's view, one of ordinary skill in the art would have also recognized that the proposed combination would have uncoupled the extended height from the required cavity depth, while maintaining and improving functionality. *Id.* at 27 (citing Ex. 1032 ¶ 60).

Also, according to Petitioner, one of ordinary skill in the art would have further recognized that the proposed combination would have increased the extended height and reduced the height of the apparatus when collapsed because Grinfas's resilient portion 82 occupies less space when collapsed

than Nakai's shaft 21. Pet. 27–28 (citing Ex. 1004, Fig. 2; Ex. 1032 ¶ 60). Petitioner argues that one of ordinary skill in the art would have had a reasonable expectation of success in making the combination because “the structures are simple and easily understood,” “Grinfas's extension would be used in the proposed combination in essentially the same way it is described in Grinfas,” and incorporating resilient portion 82 “would not impact the functionality of Nakai. *Id.* at 28–29 (citing Ex. 1032 ¶¶ 63–67).

(1) Patent Owner's Response and Reply Arguments

(a) Hindsight

Patent Owner responds for all of the challenges that Grinfas was before the Examiner and considered during prosecution and that the claims were amended in view of Grinfas. PO Resp. 15 (citing Ex. 2014 ¶ 38). Patent Owner also argues that the other cited references alleged to be relevant and analogous art were not before the Examiner. *Id.* at 15–16.

In Patent Owner's view, Petitioner's obviousness contentions are “overwhelmingly guided by hindsight bias,” “seek[] to find the elements of claims 2 and 8 of the '024 in the prior art” and assert reasons “however slim” that the ordinarily skilled artisan would have been “specifically and conveniently motivated to combine unrelated pieces of prior art in just the right way so as to try to produce the claimed invention.” PO Resp. 16 (citing Ex. 2014 ¶ 39). Patent Owner contends that Petitioner's declarant “is guided by the premise that it would be obvious to a [person of ordinary skill in the art] to make the invention rather than to combine elements found in the prior art according to the teachings of the prior art.” *Id.* (citing Ex. 2014 ¶¶ 40–43).

Specifically for this challenge, Patent Owner argues that hindsight bias guides the proposed combination, rather than combining prior art

elements “according to the teachings of the prior art” (PO Resp. 16–17 (citing Ex. 2014 ¶ 39)) and “because it has the benefit of looking back and seeing that PopSockets was able to eventually successfully manufacture such a device” (*id.* at 29 (citing Ex. 2014 ¶ 103)).

As for the argument that each proposed combination “amounts to combining known elements according to known methods to yield predictable results,” Patent Owner responds that hindsight guides the argument and “does not account for the manufacturing difficulty of molding a flexible telescopic arrangement at a small enough scale and strong enough to be usable for a grip for a mobile device.” PO Resp. 23 (citing Ex. 1032, 117; Ex. 2014 ¶ 49).

Petitioner replies that the combination of Nakai and Grinfas is a “natural extension of the teachings from the two references describing expanding/collapsing phone accessories.” Pet. Reply 9 (citing Ex. 1034 ¶ 26).

(b) Inadequate Strength

Patent Owner responds that the prior art teaches that “bellows alone would not have adequate strength to support mobile handheld devices.” PO Resp. 17–19 (citing Ex. 2014 ¶ 44). Patent Owner points to the use of a deformable metal plate in a bellows arrangement, as an example. *Id.* at 19 (citing Ex. 2014 ¶ 45). According to Patent Owner, “[t]his teaches away from using a bellows arrangement to support bending loads.” *Id.* (citing Ex. 2014 ¶ 45).

Patent Owner also responds that Petitioner’s declarant insufficiently reasons that Grinfas would be suitable for a grip. PO Resp. 19–20 (citing Ex. 2014 ¶¶ 45, 46). In Patent Owner’s view, “the capacity of a structure at the scale of Grinfas is not a reliable indicator of its capacity when made

small enough to at least potentially appear to be useable as a grip.” *Id.* at 20–21 (citing Ex. 2014 ¶46). Patent Owner argues that Grinfas has sufficient stiffness for use as a sound conduit, not a grip, and is easily collapsible for the user to stow the conduit. *Id.* at 21 (citing Ex. 2014 ¶46). Patent Owner also argues that Grinfas further describes adding additional stiffeners for compressive forces, not radial forces for gripping. *Id.* at 21–22 (citing Ex. 2014 ¶46).

According to Patent Owner, Grinfas does not teach that its “structure would be stiff enough to support shear or *bending* stresses such as would be expected if used to carry the weight of the phone rather than to carry its own self weight and transmit sound waves.” PO Resp. 22 (citing Ex. 2014 ¶46). Patent Owner contends that “a sizeable extrapolation” is required to conclude that Grinfas teaches “adequate strength to carry the mobile device when gripped.” *Id.* (citing Ex. 2014 ¶46). Patent Owner also points to Grinfas’s manner of fastening to a mobile device and argues that the depicted strap would not be expected to hold the shear loads from using Grinfas as a grip and the depicted mobile device would not prevent straps from slipping off. *Id.* at 22–23 (citing Ex. 1003, Figs. 4A 4B; Ex. 2014 ¶46).

Petitioner replies that Grinfas’s extension is already small enough to be attached to a phone. Pet. Reply 13 (citing PO Resp. 20–21, 24; Ex. 1034 ¶31). Petitioner contends that bodily incorporation is not required and the figures do not indicate scale. *Id.* (citing Ex. 1035, 196:23–197:5).

Petitioner also replies that the claims do not require stiffness to support the weight of the mobile device and the Specification does not indicate such stiffness because fingers or the hand wrap around the device. Pet. Reply 9–10 (citing Ex. 1001, 7:8–12, Fig. 4–6, 25, 26; Ex. 1034 ¶¶ 21–

24; Ex. 1035, 123:15–124:5), 11 (citing Ex. 1001, 1:47–51, 1:58–67, 2:4–7, claim 8). Petitioner argues that Nakai shows similar manner of use. *Id.* at 10–11 (citing Ex. 1034 ¶ 23). Petitioner also argues that Patent Owner does not dispute that the proposed combination also supports the weight of the device when used in the same manner. *Id.* at 11 (citing Ex. 1034 ¶¶ 22–25).

Petitioner further replies that Grinfas’s extension is sufficiently rigid, as confirmed by Patent Owner’s declarant. Pet. Reply 11 (citing PO Resp. 20–25; Ex. 1032 ¶ 55; Ex. 1034 ¶ 27; Ex. 2014 ¶ 107). Petitioner contends that Patent Owner does not provide any evidence that the additional stiffeners of Grinfas would only impact compressibility. *Id.* at 12 (citing PO Resp. 21–22; Ex. 1003, 2:17–19, 9:19–21; Ex. 1034 ¶¶ 28, 29).

Petitioner also argues that metal plates for reinforcing imparts additional bending functionality, which is not an issue in the ’024 patent, and, thus, would not teach away. Pet. Reply 15 (citing PO Resp. 17–19; Ex. 1034 ¶¶ 35–36; Ex. 1045, 1:29–31). Petitioner further argues that one of ordinary skill in the art would have been able to address the difficulties that Patent Owner identifies. *Id.* at 15–16 (citing PO Resp. 8–9; Ex. 1034 ¶¶ 37–38; Ex. 2013 ¶¶ 34, 36).

Patent Owner replies that Petitioner fails to rebut arguments regarding the weight of the device, because the grip must support the device, even if a user’s hand supports the device. PO Sur-reply 5–6 (citing Ex. 2014 ¶ 47). Patent Owner also argues that the grip needs to be able to withstand shear and bending forces as the device is oriented into various positions. *Id.* at 6 (citing Ex. 1035, 35:7–18, 36:1–7, 51:20–53:12; Ex. 2014 ¶ 47). Patent Owner further argues that Petitioner does not rebut that one of ordinary skill in the art would not have expected Grinfas to be able to withstand the shear and bending stresses used to support a device. *Id.* (citing PO Resp. 20–22;

Ex. 2014 ¶ 47). Patent Owner additionally argues that the proposed combination does not address such stresses, and the argument about stiffeners is not applied meaningfully to these stresses. *Id.* at 6–7 (citing Ex. 1034 ¶ 28).

Patent Owner also replies that Petitioner conflates compressive support and rigidity. PO Sur-reply 7 (citing Pet. Reply 11; Ex. 1035, 37:3–6). Patent Owner argues that Petitioner’s declarant “does not provide evidence that the Grinfas extension would be sufficiently stiff to resist the shear or bending forces concomitant with supporting the handheld device” and “Petitioner provides no credible evidence that Grinfas would support the shear or bending forces.” *Id.* at 7–8 (citing Pet. Reply 11, 12; Ex. 1034 ¶ 27). Patent Owner also argues that “Petitioner fails to cite any examples in which a bellows structure was used for support” and fails to rebut that the references do not suggest that a bellows arrangement would be suitable as a grip. *Id.* at 8 (citing PO Resp. 17–23; Ex. 2014 ¶ 64).

(c) Lack of Securing Structure

Patent Owner responds that Grinfas does not disclose a securing structure because Grinfas “is not designed to support the weight of the cellular phone.” PO Resp. 24. Patent Owner contends that one of ordinary skill in the art would not have used the sound conduit Grinfas as the basis for a phone grip because the sound conduit would have been optimized for auditory purposes and would have been light enough to held up to an ear for extended periods of time. *Id.* at 24–25.

Petitioner replies that Patent Owner provides no support that Grinfas’s straps are inadequate to hold much shear loads. Pet. Reply 12 (citing PO Resp. 23; Ex. 1034 ¶ 30). Petitioner points out that Grinfas also describes

other ways of attaching which would resist shear and bending forces. *Id.* (citing Ex. 1003, 1:26–2:4; Ex. 1034 ¶ 30).

(d) Insufficient Motivation to Combine

Patent Owner responds that one of ordinary skill in the art would not have made the proposed combination. PO Resp. 16 (citing Ex. 2014 ¶ 39). According to Patent Owner, using Grinfas as a grip for a mobile device “would have been extremely difficult, nearly impossible even, to manufacture Grinfas as a conical shape at the small scale that would be required for use as a grip and would have gone against all the rules of design.” *Id.* at 17 (citing Ex. 2014 ¶ 44); *see also id.* at 8–10 (presenting similar arguments in its contentions for the interpretation of “conical”).

In Patent Owner’s view, Petitioner provides an insufficient motivation to combine Nakai and Grinfas. PO Resp. 25–36. Patent Owner argues that the proposed combination does not add much to references considered during prosecution. *Id.* at 25 (citing Ex. 2014 ¶ 100). Patent Owner provides a summary of their disclosures and contends that “Nakai in view of Grinfas is merely cumulative to the prior art that was already before the examiner during the prosecution of the ’024” and the claims of the ’024 patent were found to be not obvious and allowed. *Id.* at 25–28 (citing Ex. 2014 ¶¶ 101, 102).

Patent Owner contends that the “proposed combination would require transforming Grinfas into a conical arrangement, and attempting to manufacture it at a small enough scale to be suitable for a phone grip while significantly improving its structural capacity at the same time.” PO Resp. 28 (citing Ex. 2014 ¶ 102). According to Patent Owner, the combination “is no simple task,” “nearly impossible to manufacture,” and “would go against all the rules of design.” *Id.* (citing Ex. 2014 ¶ 102).

Because a telescopic bellows arrangement, such as Grinfas, “went against all the rules of design,” Patent Owner argues that one of ordinary skill in the art would have understood that Grinfas “would add a significant amount of difficulty to the design,” would have needed “more motivation than whether it was a theoretical possibility as a design choice.” PO Resp. 28 (citing Ex. 2014 ¶ 103). Patent Owner also argues that the proposed combination would not have been “a matter of routine engineering.” *Id.* (citing Ex. 2014 ¶ 103).

Petitioner replies that Patent Owner fails to provide evidence of difficulties in manufacturing, other than unsupported testimony. Pet. Reply 13 (citing PO Resp. 9, 28–29). Petitioner argues that Grinfas’s extension is already appropriately sized, Grinfas does not indicate any manufacturing challenges or special manufacturing techniques, and Patent Owner notes that bellows-like structures were common. *Id.* at 14–15 (citing PO Resp. 17; Ex. 1003, 7:8–17; Ex. 1034 ¶¶ 32–35; Ex. 1045, Abstract, Figs. 1, 2).

Patent Owner replies that Petitioner fails to provide evidence that one of ordinary skill in the art would have overcome the challenges in making the proposed combination. PO Sur-reply 5. Regarding the size of Grinfas, Patent Owner replies that Grinfas counsels a large diameter for use as a sound conduit, but design goals for a grip counsel toward a thinner design. *Id.* at 8–9 (citing Pet. Reply 13; Ex. 1035, 184:13–186:9; Ex. 2014 ¶ 49).

For the same reasons, Patent Owner replies that Petitioner fails to rebut arguments related to manufacturing difficulties and provides no contrary evidence. PO Sur-reply 9–10 (citing PO Resp. 7–10, 17–19; Pet. Reply 13, 14–15; Ex. 1003, 7:8–17; Ex. 1034 ¶ 34; Ex. 2014 ¶¶ 44, 49, 62, 63, 71, 86, 87, 98, 102–106). Patent Owner argues that manufacturing

difficulties are “strong evidence” that the proposed combination would not have been made. *Id.* at 10–11 (citing Pet. Reply 16; Ex. 2007, 3; Ex. 2014 ¶¶ 102–104). Patent Owner also argues that “Petitioner does not address that molding a single piece conical telescoping flexible tubular structure would be a significant engineering and manufacturing challenge that would be well beyond what would be considered routine engineering.” *Id.* at 18 (citing Ex. 2014 ¶ 120).

(e) Alternatives to the Proposed Combination

Patent Owner responds that other references describe alternative embodiments that are not as complicated or impossible to manufacture and that Petitioner does not address why those alternatives would not have been used. PO Resp. 29–33 (citing Ex. 1004 ¶¶ 25, 61, 63, 64, Figs. 8, 9, 25; Ex. 1032, 29; Ex. 2014 ¶ 104–107).

Patent Owner contends that the proposed combination would have required a larger cavity than shown in Nakai’s Figure 25 which would be undesirable and add immense manufacturing difficulty. PO Resp. 33–34 (citing Ex. 1004, Fig. 25; Ex. 1032, 38; Ex. 2014 ¶¶ 108, 109). Patent Owner also contends that the proposed combination would not function as a stand and that Nakai provides an embodiment with a stand and a reduced cavity. *Id.* at 34–36 (citing Ex. 1004, Figs. 10–12; Ex. 2014 ¶¶ 109, 110). Patent Owner further contends that Petitioner uses a more expensive and complex combination than the cheaper and less complex alternative shown in Nakai. *Id.* at 36 (citing Ex. 2014 ¶ 111).

Petitioner replies that a suitable, not the best, combination is sufficient to show obviousness, that one of ordinary skill in the art would have recognized specific improvements (such as reduced cavity size) in the proposed combination, and that one of ordinary skill in the art would have

been motivated to make the proposed combination. Pet. Reply 16–17 (citing PO Resp. 33–36; Ex. 1032 ¶¶ 46–49, 51; Ex. 1034 ¶¶ 40–41, 43).

Patent Owner replies that “the issue is not whether a [person of ordinary skill in the art] would have found Nakai-Grinfas to be a ‘suitable’ option,” but that “Petitioner has failed to establish that a [person of ordinary skill in the art] would have *selected* the Nakai-Grinfas components *for combination in the manner claimed*.” PO Sur-reply 12. Patent Owner also argues that Petitioner fails to rebut that the proposed combination would require a larger cavity. *Id.* at 12–13 (citing PO Resp. 33; Pet. Reply 17; Ex. 2014 ¶ 108).

Patent Owner also replies that the proposed combination would not extend and compress because when the solid disc “grip” of Nakai is affixed to the conduit of Grinfas, it would block orifice 98 of Grinfas, and “the combination would create an air chamber with no relief.” PO Sur-reply 13 (citing Ex. 1003, Fig. 7A; Ex. 1004, Fig. 1; Ex. 1035, 405:7–407:16).

(f) Functionality

Patent Owner responds that “Petitioner’s proposed combination does not depict an apparatus that is as functional as the invention disclosed in claim 2” because it “demonstrates a grip that is too small to allow for the fingers to hold it effectively” and would require substantial modification to Nakai to accommodate for Grinfas’s resilient portion 82. PO Resp. 39–42. According to Patent Owner, the modifications would include a “much wider opening,” “new device design,” or “specially-designed device case.” *Id.* at 42.

Petitioner replies that “claim 2 does not recite the degree to which a user’s fingers must be under the grip structure” and that Patent Owner’s figures showing the gripping of the proposed combination is similar to

Nakai's figures. Pet. Reply 18–19 (citing Pet. 23 n.7; PO Resp. 39–41; Ex. 1034 ¶¶ 47, 48). Petitioner also argues that “enlarging the size of an existing opening to accommodate a wider grip” would not have been “a substantial modification” and a “substantial modification” would not be deterred if there were a substantial benefit, as in the proposed combination. *Id.* at 19 (citing PO Resp. 41; Ex. 1034 ¶ 49).

Patent Owner replies “Petitioner does not argue, much less provide evidence, that a user could fit their fingers under the grip in the proposed combination to hold a device effectively.” PO Sur-reply 14–15 (citing Pet. Reply 18). Patent Owner also replies that Petitioner fails to counter that the proposed modification would require substantial modification to Nakai to accommodate Grinfas. *Id.* at 15 (citing PO Resp. 41–42; Ex. 2014 ¶¶ 104, 109–112). Patent Owner contends that Petitioner fails to offer evidence of any benefit, let alone substantial benefits. *Id.* (citing Pet. Reply 19).

(2) Petitioner Shows a Sufficient Motivation to Combine

Petitioner cites to portions of Nakai that describe the difficulty of holding and operating a portable telephone with one hand, but that using one hand to hold and operate the phone is desirable. Ex. 1004, ¶¶ 4, 5; Ex. 1032 ¶ 45. Other cited portions describe Nakai's finger-engaging member 2 as a solution. Ex. 1004, Abstract, ¶ 15, Figs. 2, 3; Ex. 1032 ¶ 45.

Petitioner cites to portions of Grinfas that describe resilient portion 82 that “is collapsible and foldable into itself.” Ex. 1003, 9:14–18. The cited portion supports Petitioner's testimonial evidence that one of ordinary skill in the art would have recognized resilient portion 82 can be a substitute for Nakai's shaft and spring extension, and we credit that testimony. Ex. 1032 ¶ 60; *see also* Ex. 1003, 9:14–18, Fig. 7B; Ex. 1004, Figs. 8, 9.

We also credit Petitioner’s testimonial evidence that one of ordinary skill in the art would have understood that “space for components within a cell phone was at a premium in the cell phone industry, and a smaller cavity would represent a more efficient use of such space.” Ex. 1032 ¶ 47. There is no dispute that a smaller cavity would lessen the need to displace internal components of the handheld device, allow for thinner devices, and improve the apparatus’s ergonomics and functionality, as argued by Petitioner. Pet. 25; Ex. 1032 ¶¶ 48–49, 57–58.

We, thus, credit Petitioner’s testimonial evidence that minimizing Nakai’s cavity size would “reduce the need for the cell phone (or other device) to be specially manufactured” to implement Nakai’s solution and “would improve the commercial prospects for Nakai’s apparatus.” Ex. 1032 ¶ 47. Petitioner, therefore, persuades us that one of ordinary skill in the art would have been motivated to search for other approaches to minimize Nakai’s apparatus. Pet. 22; Ex. 1032 ¶ 53.

The relied-upon portion of Grinfas supports Petitioner’s position that a smaller cavity can be achieved with Grinfas’s extension. Ex. 1032 ¶¶ 57–58. Grinfas also supports that its resilient portion 82 would have uncoupled the extended height from the required cavity depth, while maintaining and improving functionality. Pet. 27; Ex. 1032 ¶ 61.

Petitioner, thus, persuades us that one of ordinary skill in the art would have been motivated to modify Nakai to incorporate Grinfas’s flexible collapsible extension because the “combination would minimize the size of the cavity need to accommodate Nakai’s finger-engaging member 2 in collapsed position” and the fully extended height would be higher for the given cavity depth. Pet. 22–23; Ex. 1032 ¶ 54. We agree that that the

proposed combination can be achieved by replacing Nakai's shaft 21 and spring 24 with Grinfas's resilient portion 82. Pet. 24; Ex. 1032 ¶ 55.

We also agree that “it would have been a matter of routine engineering to resize the diameter of Nakai's shaft insertion hole 111 to accommodate Grinfas's extension and Nakai's finger-engaging part 22” and “to achieve a flush state in the collapsed position.” Pet. 24–25; Ex. 1032 ¶ 56. Moreover, Petitioner persuades us that one of ordinary skill in the art would have been motivated to modify Nakai so that the handheld device's thickness would not limit the extended height of Nakai's apparatus so that it could function as a stand or cord-management system and accept larger-sized fingers. Pet. 20–21; Ex. 1032 ¶ 49.

As for reasonable expectation of success, based on the above, Petitioner persuades us that “the structures are simple and easily understood,” “Grinfas's extension would be used in the proposed combination in essentially the same way it is described in Grinfas,” and incorporating resilient portion 82 “would not impact the functionality of Nakai. Pet. 28–29; Ex. 1003, 7:26–8:2, 9:15–21, Fig. 2; Ex. 1004, Abstract; Ex. 1032 ¶¶ 63–65.

Based on our findings above, Petitioner persuades us that one of ordinary skill in the art would have been motivated to make the combination in the manner proposed with a reasonable expectation of success. Pet. 19–29.

Regarding the use of hindsight, as described above, Nakai describes replacing its shaft 21 and spring 24 with other components. *See, e.g.*, Ex. 1004, Figs. 8, 9. Petitioner asserts that one of ordinary skill in the art would have used another component (Grinfas's resilient portion 82) to replace the same shaft 21 and spring 24. Pet. 19–29. Nakai's other

embodiments indicate that Petitioner’s proposed combination would have been well within ordinary skill in the art. *See, e.g.*, Ex. 1004, Figs. 8, 9. For these reasons, we agree with Petitioner that the combination of Nakai and Grinfas is a “natural extension of the teachings from the two references describing expanding/collapsing phone accessories.” Pet. Reply 9; Ex. 1034 ¶ 26.

As for the dispute about Grinfas’s strength, Petitioner argues that Grinfas teaches that its collapsible apparatus “has sufficient stiffness or hardness when fully extended” and “is collapsible and foldable into itself.” Pet. 26–27 (citing Ex. 1003, 9:14–18; Ex. 1032 ¶ 60). Petitioner also provides testimonial evidence that Grinfas would have sufficient strength in the proposed combination. Ex. 1032 ¶¶ 64–67.

The full record does not include a reason why resilient portion 82 could not have been made from another suitable material in view of its use as a grip in the proposed combination. Grinfas itself expressly describes that “[r]esilient portion 82 may be made of any elastomeric material, such as rubber or neoprene, for example, with a suitable durometer so that collapsible sound conduit 80 has sufficient stiffness or hardness when fully extended.” Ex. 1003, 9:15–18.

We find that Grinfas indicates that one of ordinary skill in the art would have been able to select any suitable elastomeric material for resilient portion 82 so that, when used in Nakai, it would have sufficient stiffness or hardness when fully extended. *See* Ex. 1003, 9:15–18. The full record presents no reason why it would have been beyond ordinary skill in the art to select an appropriate material for resilient portion 82 in the proposed combination, given the already identified material.

Regarding a securing structure, we find that Grinfas describes attaching to the phone by “bonding,” “fastener,” or “being integrally formed therewith.” Ex. 1003, 1:26–2:4. Grinfas, thus, indicates that at least these ways of attaching were known and within ordinary skill in the art when combining Nakai and Grinfas in the manner Petitioner proposes. Ex. 1032 ¶ 55 (opining that “it would be a matter of routine engineering to attach the base of Grinfas’s resilient portion 82 to the bottom of Nakai’s cavity”).

The asserted presence of better alternatives to Petitioner’s proposed combination does not address Petitioner’s arguments. PO Resp. 29–36; PO Sur-reply 12–13. As discussed above, Petitioner shows that one of ordinary skill in the art would have made the proposed combination. Pet. 19–29.

Petitioner also provides arguments why one of ordinary skill in the art would not have turned to those embodiments because of size, cost, or complexity. See Pet. 21–22; Ex. 1032 ¶¶ 51, 52. In Patent Owner’s view, those alternatives have a smaller cavity, are cheaper, and are less complex. See PO Resp. 33–36. We agree with Petitioner that only a suitable, not the best, option needs to be shown. Pet. Reply 17; *Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1380 (Fed. Cir. 2023) (“And if there’s a known technique to address a known problem using “prior art elements according to their established functions,” then there is a motivation to combine. *Intel*, 21 F.4th at 799–800. And we specify *address* a known problem because “[i]t’s not necessary to show that a combination is the *best* option, only that it be a *suitable* option.” *Id.* at 800 (cleaned up) (emphasis in original).

Patent Owner asserts that these alternatives would be a reason not to make Petitioner’s proposed combination (PO Resp. 33–36), but they also indicate that one of ordinary skill in the art would have considered replacing shaft 21 and spring 24 of Nakai (Ex. 1004, Figs. 8, 9), in a manner similar to

Petitioner's proposed modification, because such replacement is shown in Nakai's alternatives.

As for the functionality of the proposed combination, the full record supports that resizing such a component and any other component in the proposed modification would have been "a matter of routine engineering" or within ordinary skill in the art. *See* Pet. 8 (asserting a level of ordinary skill in the art), 24 (arguing that resizing shaft insertion hole 111 would have been a "matter of routine engineering"); Ex. 1032 ¶¶ 55, 63. Nakai also provides evidence that it was within ordinary skill to determine how to make a grip that allow fingers to hold it effectively.

h) Petitioner Shows that Claim 2 is Unpatentable

"Once all relevant facts are found, the ultimate legal determination [of obviousness] involves weighing of the fact findings to conclude whether the claimed combination would have been obvious to an ordinary artisan."

Arctic Cat Inc. v. Bombardier Recreational Prods. Inc., 876 F.3d 1350, 1361 (Fed. Cir. 2017) (quoting *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1068–69 (Fed. Cir. 2012)).

Above, based on full record before us, we provide our factual findings regarding (1) the level of ordinary skill in the art, (2) the scope and content of the prior art, (3) any differences between the claimed subject matter and the prior art, and (4) objective evidence of nonobviousness.

We find that (1) Petitioner's proposed level of ordinary skill in the art is consistent with the prior art of record, (2) Nakai and Grinfas teach or suggest all the limitations of claim 2, (3) one of ordinary skill in the art would have combined Nakai and Grinfas with a reasonable expectation of success, and (4) no objective evidence of nonobviousness has been presented in relation to any challenged claim.

Weighing these underlying factual determinations, Petitioner persuades us by a preponderance of the evidence that claim 2 of the '024 patent is unpatentable over Nakai and Grinfas. *Arctic Cat*, 876 F.3d at 1361.

4. *Claim 8*

- a) *“A method of using a collapsing and expanding one hand gripping apparatus and fastening the one hand gripping apparatus to the handheld device or handheld device's case, the method comprising the steps of:”*

Petitioner contends with reference to its arguments for claim 2 that the proposed combination of Nakai and Grinfas teaches a “method of using a collapsing and expanding one hand gripping apparatus and fastening the one hand gripping apparatus to the handheld device or handheld device’s case,” the preamble of claim 8, if it is limiting. Pet. 40–41 (citing Ex. 1032 ¶¶ 96–97); *see also id.* at vii (labeling the preamble “8(pre)”).

We agree with Petitioner’s testimonial evidence that the asserted references teach the preamble of claim 8, because the cited portions of Nakai support it. Ex. 1004, Abstract, ¶¶ 17, 18, Fig. 3; Ex. 1032 ¶¶ 96–97. Patent Owner does not provide a responsive argument for the preamble of claim 8. *See* PO Resp. 16–48.

Based on the full record, Petitioner persuades us, and we find, that Nakai teaches or suggests the preamble, to the extent it is limiting.

- b) *“obtaining a collapsing and expanding one hand gripping apparatus as recited in claim 2,”*

Petitioner also contends with reference to arguments for claim 2 that Nakai and Grinfas teach the above-quoted step. Pet. 41 (citing Ex. 1032 ¶¶ 98–99); *see also id.* at viii (labeling the limitation “8(a)”).

Patent Owner responds that, because Nakai and Grinfas do not disclose all the limitations of claim 2, they do not disclose all the limitations of claim 8. PO Resp. 45 (citing Ex. 2014 ¶ 117).

For the reasons discussed above, in view of the full record before us, Petitioner persuades us that Nakai and Grinfas would have rendered obvious the collapsing and expanding one hand gripping apparatus of claim 2.

- c) *“fastening or building the one hand gripping apparatus to the back of the handheld device or back of the handheld device case in an expanded position perpendicular to the handheld device,”*

For step quoted above, Petitioner refers to its arguments for claim 2 and additionally contends that Nakai teaches fixing its apparatus to the back of a cellular phone and that its apparatus has an extension perpendicular to the phone. Pet. 41 (citing Ex. 1004 ¶¶ 9, 11, Figs. 2, 3, 5, 6); *see also id.* at viii (labeling the limitation “8(b)”). Petitioner also contends that Grinfas has similar teachings by reference to previous arguments. *Id.* Petitioner, thus, contends that the proposed combination satisfies the step. *Id.* (citing Ex. 1032 ¶¶ 100–101).

(1) Patent Owner’s Response

Patent Owner responds that both Nakai and Grinfas describe heavier mobile devices and so one of ordinary skill in the art would have recognized that an extension would need to be built into the device structure to support its weight. PO Resp. 44–45. Patent Owner argues that neither reference describes the ability to attach the grip. *Id.* at 45.

Patent Owner also argues that Petitioner fails to show that extension would be “in an expanded position perpendicular to the handheld device.” PO Resp. 45–46 (citing Ex. 1032, 61; Ex. 2014 ¶ 118). According to Patent Owner, Grinfas is prone to collapse under compressive load, and such loads

would be required to fasten the proposed combination to a mobile device. *Id.* at 46 (citing Ex. 2014 ¶ 119). Patent Owner, thus, argues that “if such a combination were built (which itself has no motivation to combine as previously discussed) that it would be installed in a condensed position as opposed to an expanded position perpendicular to the handheld device.” *Id.* (citing Ex. 2014 ¶ 119).

Patent Owner contends that Grinfas does not require handling compressive loads and the testing conducted by Petitioner’s declarant does not provide reliable indication of compressive resistance. PO Resp. 46–47 (citing Ex. 2014 ¶¶ 119, 120).

(2) Reply Arguments

Petitioner replies that Grinfas describes several ways of attaching, including adhesive, which is also described in the ’024 patent. Pet. Reply 22 (citing PO Resp. 44–45; Ex. 1001, 3:64–67; Ex. 1032 ¶¶ 55, 74). Petitioner also replies that Figures 3 and 4A of Grinfas show attaching in the expanded position and that Petitioner relies on Figure 3. *Id.* at 22–23; (citing Pet. 41; Ex. 1003, Fig. 3; Ex. 1032 ¶¶ 55, 100; Ex. 1034 ¶¶ 55–56; Ex. 1035, 196:6–19). Petitioner, thus, argues that one of ordinary skill in the art would have attached Grinfas to Nakai in the same manner. *Id.* at 23 (citing Ex. 1034 ¶ 57).

Patent Owner replies that, because the proposed combination does not disclose all the limitations of claim 2, it cannot disclose all the limitations of claim 8. PO Sur-reply 17. Patent Owner also replies that “the proposed combination only discloses an apparatus built into the device—not attached to it.” *Id.* (citing PO Resp. 44–45). Patent Owner further replies that the combination does not disclose the step involving attachment, and that

Petitioner does not dispute that heavier phones encourage building the extension into the device. *Id.* (citing Pet. Reply 22–23).

(3) Petitioner Shows that the Proposed Combination Meets the Limitation

As discussed above for claim 2, Petitioner persuades us by a preponderance of the evidence that Nakai and Grinfas teach or suggest all the limitations of claim 2, and that the proposed combination would have rendered obvious the same claim.

For the same reason stated for claim 2, we determine for claim 8 that Petitioner shows Grinfas has adequate strength for support and Grinfas teaches attaching to a phone. *See* Pet. 26–27; Ex. 1003, 9:15–18. We agree with Petitioner that one of ordinary skill in the art would have attached Grinfas to Nakai in the manner shown in Figures 3 and 4A of Grinfas that show attaching in the expanded position. Pet. Reply 22–23; *see also* Pet. 41 (citing Ex. 1003, Figs. 2, 3, 5, 6).

Furthermore, the limitation recites “fastening or building the one hand gripping apparatus to the back of the handheld device.” Petitioner argues that the proposed combination is achieved “by simple replacement of Nakai’s shaft 21 and spring 23 with resilient portion 82 of Grinfas’s collapsible conduit 80, and attachment of the base of Grinfas’s resilient portion 82 to the bottom of Nakai’s cavity.” Pet. 24. In other words, Petitioner proposes building the asserted extension into Nakai’s phone. For the reasons discussed above for claim 2, Petitioner persuades us that the proposed combination meets “building the one hand gripping apparatus to the back of the handheld device.”

As for “fastening . . . the one hand gripping apparatus to the back of the handheld device,” Petitioner argues “[m]oreover, Nakai discloses how to

use a collapsible and expandable one hand gripping apparatus fastened to a mobile phone” and that the same teaching would apply to the proposed combination. Pet. 40–41 (citing Ex. 1032 ¶¶ 96–97).

For the reasons above, based on the full record, Petitioner persuades us, and we determine, that the proposed combination teach, suggest, and would have rendered obvious “fastening or building the one hand gripping apparatus to the back of the handheld device or back of the handheld device case in an expanded position perpendicular to the handheld device.”

d) “receiving two adjacent non-thumb fingers of a gripping hand inserted between the handheld device and the other end of the one hand gripping apparatus, each received finger straddling the sides of the one hand gripping apparatus, wherein a fingerprint side of the received fingers face the handheld device and in contact with the one hand gripping apparatus and/or the back of the handheld device or the handheld device’s case, wherein a”

For the limitations quoted above, Petitioner relies on Nakai’s teachings of how a user’s fingers interact with finger-engaging part 22 and shaft 21. Pet. 41–42 (citing Ex. 1004 ¶¶ 18, 23, Fig. 4); *see also id.* at viii (labeling the limitation “8(c)”). Petitioner also argues that one of ordinary skill in the art would have understood that the same manner of operation would apply to the proposed combination of Nakai and Grinfas. *Id.* at 42 (citing Ex. 1032 ¶¶ 102–103).

A cited portion of Nakai describes:

two fingers, for example, an index finger A and middle finger B, are inserted . . . between the opposing surfaces of the back surface part 11 of the portable telephone 1 and . . . the finger-engaging part 22 of the finger-engaging member 2 along two sides of the shaft 21 of the finger-engaging member 2 so as to sandwich the shaft

Ex. 1004 ¶ 18, Fig. 4. Another cited portion describes that, as a result, “it becomes possible to nimbly operate the portable telephone 1 by operating the buttons 13 by smoothly and accurately moving the thumb T in a state where the portable telephone 1 has been stably supported.” *Id.* ¶ 23.

We credit Petitioner’s testimonial evidence that the described manner of holding the phone of Nakai would be substantially the same for the phone of the proposed combination. Ex. 1032 ¶¶ 102–103. Patent Owner does not provide a responsive argument for the above-quoted limitation. *See* PO Resp. 16–48.

Based on the full record, Petitioner persuades us, and we determine, that its proposed combination teaches, suggests, and would have rendered obvious the above-quoted limitation.

e) *“gripping hand’s thumb and portion of palm wrap around to the front of the handheld device wherein”*

For the limitation quoted above, Petitioner relies on Nakai’s express teachings of holding its phone in the recited manner. Pet. 43 (citing Ex. 1004 ¶¶ 3–5, 12, 13, 18–20, Fig. 4); *see also id.* at viii (labeling the limitation “8(d)”). Petitioner also argues that one of ordinary skill in the art would have understood that the same manner of holding would apply to the proposed combination of Nakai and Grinfas. *Id.* at 43 (citing Ex. 1032 ¶ 106).

A cited portion of Nakai describes “the portable telephone is placed on the palm and held stably from the back surface side with four fingers excluding the thumb, and the thumb is used to press the buttons on the front surface of the portable telephone.” Ex. 1004 ¶ 3. The other cited portions of Nakai provide similar descriptions. *See id.* ¶¶ 4, 5, 12, 13, 18–20, Fig. 4.

We credit Petitioner’s testimonial evidence that the described manner of holding the phone of Nakai would be substantially the same for the phone of the proposed combination. Ex. 1032 ¶ 106. Patent Owner does not provide a responsive argument for the above-quoted limitation. *See* PO Resp. 16–48.

Based on the full record, Petitioner persuades us, and we determine, that its proposed combination teaches, suggests, and would have rendered obvious “gripping hand’s thumb and portion of palm wrap around to the front of the handheld device.”

f) “a step of a one hand gripping apparatus collapsing is removing the fingers of the gripping hand from the one hand gripping apparatus such that the one hand gripping apparatus lies flat to the handheld device.”

For the limitation quoted above, Petitioner relies on Nakai’s teachings that its apparatus has a collapsed position when the user’s fingers are removed. Pet. 44 (citing Ex. 1004 ¶ 50, Figs. 12–15); *see also id.* at viii (labeling the limitation “8(e)”). Petitioner argues that one of ordinary skill in the art would have understood that the same would happen in the proposed combination of Nakai and Grinfas. *Id.* at 44 (citing Ex. 1032 ¶ 108). Petitioner also argues the proposed combination has the step under Petitioner’s proposed interpretation based on Patent Owner’s position in related litigation. *Id.* (citing Ex. 1032 ¶¶ 110–111).

The cited portions of Nakai describe “finger-engaging part 32 . . . is stored completely inside the finger-engaging member storage recess 31, and in that state, the finger-engaging member 2d comes to be unobtrusively stored.” Ex. 1004 ¶ 50, Figs. 12–15.

We credit Petitioner’s testimonial evidence that, in the proposed combination, the finger-engaging part would be similarly stored

unobtrusively. Ex. 1032 ¶¶ 108, 110–111. Patent Owner does not provide a responsive argument for the above-quoted limitation. *See* PO Resp. 16–48.

Based on the full record, Petitioner persuades us, and we determine, that its proposed combination teaches, suggests, and would have rendered obvious “a step of a one hand gripping apparatus collapsing is removing the fingers of the gripping hand from the one hand gripping apparatus such that the one hand gripping apparatus lies flat to the handheld device.”

g) Patent Owner’s Response

Patent Owner responds that “there is insufficient motivation to replace the ‘shaft’ of Nakai with the ‘sound conduit’ of Grinfas,” and “[i]f a person of ordinary skill were attempting to conserve space on a mobile phone, Nakai’s shaft could simply have articulated down at an angle when not in use, as e.g., Nakai’s Figures 10, 19, and 20 explain.” PO Resp. 45. Patent Owner, thus, argues that the asserted motivation “had already been addressed by Nakai.” *Id.*

As discussed above for claim 2, Petitioner persuades us that the ordinarily skilled artisan would have made the proposed combination and would not have selected other embodiments described in Nakai for the reasons asserted by Petitioner. *Intel*, 61 F.4th at 1380.

Based on the full record before us, Petitioner persuades us that one of ordinary skill in the art would have been motivated to make the proposed modification of Nakai in view of Grinfas with a reasonable expectation of success.

h) Petitioner Shows by a Preponderance of the Evidence that Claim 8 is Unpatentable

We find that (1) Petitioner’s proposed level of ordinary skill in the art is consistent with the prior art of record, (2) Nakai and Grinfas teach or

suggest all the limitations of claim 8, (3) one of ordinary skill in the art would have combined Nakai and Grinfas with a reasonable expectation of success, and (4) no objective evidence of nonobviousness has been presented in relation to any challenged claim.

Weighing these underlying factual determinations, Petitioner persuades us by a preponderance of the evidence that claim 8 of the '024 patent is unpatentable over Nakai and Grinfas. *Arctic Cat*, 876 F.3d at 1361.

G. Remaining Challenges

Having determined that all of the challenged claims are unpatentable over Nakai and Grinfas, we need not reach Petitioner's argument that those same claims are also unpatentable over (1) Zoller and Grinfas and (2) Damon and Grinfas. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359 (2018) (holding that a petitioner "is entitled to a final written decision addressing all of the claims it has challenged"); *Bos. Sci. Scimed, Inc. v. Cook Grp. Inc.*, 809 F. App'x 984, 990 (Fed. Cir. 2020) (non-precedential) (recognizing that the "Board need not address issues that are not necessary to the resolution of the proceeding" and, thus, agreeing that the Board has "discretion to decline to decide additional instituted grounds once the petitioner has prevailed on all its challenged claims"). Accordingly, we do not reach the other grounds.

III. CONCLUSION⁵

In summary:

Claims	35 U.S.C. §	References/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
2, 8	103(a)	Nakai, Grinfas	2, 8	
2, 8	103(a)	Zoller, Grinfas ⁶		
2, 8	103(a)	Damon, Grinfas ⁷		
Overall Outcome			2, 8	

⁵ Should Patent Owner wish to pursue amendment of the challenged claim in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

⁶ As discussed in Section II.G, we do not reach this ground.

⁷ As discussed in Section II.G, we do not reach this ground.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 2 and 8 of U.S. Patent No. 10,800,024 B2 have been shown, by a preponderance of the evidence, to be unpatentable;

FURTHER ORDERED that Petitioner's Motion to Strike (Paper 20) is denied;

FURTHER ORDERED that Patent Owner's Motion to Exclude Evidence (Paper 23) is denied; and

FURTHER ORDERED that, because this is a Final Written Decision, the parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

For PETITIONER:

Jonathan M. Lindsay
Lucas Oxenford
IRELL & MANELLA LLP
jlindsay@irell.com

For PATENT OWNER:

Robert D. Katz
Roman Madoerin
KATZ PLLC
rkatz@katzfirm.com
roman@katzfirm.com