

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

America Ugreen Limited

Petitioner

v.

SARIANA LLC

Patent Owner

Case No.: PGR2026-00062

U.S. Patent No. 12,436,567

PETITION FOR *POST GRANT REVIEW*
OF U.S. PATENT NO. 12,436,567

TABLE OF CONTENTS

I.	MANDATORY NOTICES.....	1
A.	Real Party in Interest	1
B.	Related Matters.....	1
C.	Lead And Back-Up Counsel and Service Information	1
D.	Payment of Fees (37 C.F.R. § 42.203)	2
II.	GROUND FOR STANDING AND IDENTIFICATION OF CHALLENGE	2
A.	Standing.....	2
B.	Identification of Challenge Under 37 C.F.R. § 42.204(b) and Relief Requested	2
C.	Claim Construction.....	4
D.	How The Challenged Claims Are Unpatentable and Evidence Supporting Challenge	4
III.	THE CHALLENGED CLAIMS ARE UNPATENTABLE	5
A.	Background of the Field	5
B.	Overview of the Alleged Invention.....	6
C.	The Level of Skill in the Art	8
D.	Principles of Law.....	8
E.	Ground 1: Claims 1-3 and 5-7 are Rendered Obvious over Ye in View of Apple, and Koshiishi	10
1.	Ye.....	10
2.	Apple.....	12
3.	Koshiishi	17

4.	The Combination of Ye, Apple, And Koshiishi Discloses Every Element of Claims 1-3 And 5-7.....	20
5.	A POSITA Would Have Had Reason to Combine Ye with Apple, And Koshiishi	36
F.	Ground 2: Claims 2 and 8 are Rendered Obvious over Ye in View of Apple, Koshiishi, And Satechi	40
1.	Satechi.....	40
2.	The Combination of Ye, Apple, Koshiishi, And Satechi Discloses Every Element of Claims 2 And 8.....	44
3.	A POSITA Would Have Had Reason to Combine Ye with Apple, Koshiishi, And Satechi	48
G.	Ground 3: Claim 4 Is Rendered Obvious over Ye in View of Apple, Koshiishi, and Liao.....	49
1.	Liao	49
2.	The Combination of Ye, Apple, Koshiishi, And Liao Discloses Every Element of Claim 4	51
3.	A POSITA would have had reason to combine Ye with Apple, Koshiishi, and Liao.....	54
H.	Ground 4: Claims 1-8 Are Rendered Obvious Over Liao in View of Apple and Koshiishi	55
1.	The Combination of Liao, Apple, and Koshiishi Discloses Every Element of Claims 1-8.....	55
2.	A POSITA Would Have Had Reason to Combine Liao with Apple, and Koshiishi	74
I.	Ground 5: Claims 2 and 8 are Rendered Obvious over Liao in View of Apple, Koshiishi, and Satechi	78
1.	The Combination of Liao, Apple, Koshiishi, And Satechi Discloses Every Element of Claims 2 And 8.....	78

2.	A POSITA Would Have Had Reason to Combine Liao with Apple, Koshiishi, and Satechi	83
J.	Ground 6: Claims 1-3, 5, and 8 are Rendered Obvious over Satechi in view of Apple and Shen	84
1.	Shen	85
2.	The Combination of Satechi, Apple, and Shen Discloses Every Element of Claims 1-3, 5, and 8	87
3.	A POSITA Would Have Had Reason to Combine Satechi with Apple and Shen.....	102
K.	Ground 7: Claims 4 and 7 Are Rendered Obvious over Satechi in View of Apple, Shen, and Liao.....	106
1.	The Combination of Satechi, Apple, Shen, and Liao Discloses Every Element of Claims 4 and 7	106
2.	A POSITA Would Have Had Reason to Combine Satechi with Apple, Shen, And Liao	110
L.	Ground 8: Claim 6 Is Rendered Obvious over Satechi in View of Apple, Shen, and Koshiishi.....	112
1.	The Combination of Satechi, Apple, Shen, and Koshiishi Discloses Every Element of Claim 6	112
2.	A POSITA would have had reason to combine Satechi with Apple, Shen, and Koshiishi	114
M.	Ground 9: Claim 6 is Indefinite in View of the Term “horizontally curved surface”	115
IV.	NON-REDUNDANCY OF GROUNDS	118
V.	CONCLUSION	119

LIST OF EXHIBITS

Exhibit	Description
1001	U.S. Patent No. 12,436,567
1002	Prosecution history of U.S. Patent No. 12,436,567
1003	Declaration of Dr. Himanshu Pokharna
1004	CN 216561630 U by Ye (“Ye”)
1005	Certified translation of CN 216561630 U by Ye (“Ye”)
1006	“Apple’s all-new Mac mini is more mighty, more mini, and built for Apple Intelligence” by Apple (“Apple”)
1007	US 9698613 B2 by Koshiishi (“Koshiishi”)
1008	Wayback Machine Capture on March 13, 2020 of ASIN B07YSWZNNW by Satechi (“Satechi”)
1009	WO 2020/113541 A1 by Liao (“Liao”)
1010	Certified translation of WO 2020/113541 A1 by Liao (“Liao”)
1011	“Mac mini M4 (2024): docks, stands and other Accessories”
1012	US 2022/0366400 by Shen (“Shen”)

1013	Wayback Machine Capture on October 29, 2024 of Apple
1014	“M4 Mac Mini’s Power Button Has New Bottom Location” by Juli Clover
1015	“For everyone asking, the power button on the new M4 Mac mini is on the bottom” by chancehmiller, Thread
1016	“Apple Moves the M4 Mac Mini’s Power Button To the Bottom” by msmash
1017	“Yes, the M4 Mac mini’s power button is on the bottom” by Patrick O’Rourke
1018	“M4 mini,” busybee/fluffy rambles
1019	“Apple’s New Mac mini Sports up to an M4 Pro with 14-core CPU and 20-core GPU” by GGforever
1020	Affidavit of Internet Archive Records Processor Authenticating Wayback Machine Captures for Ex. 1008 and Ex. 1013

LISTING OF CHALLENGED CLAIMS

Claim Element	Text
[1.0]	“A mini-computer stand for use with a mini-computer that has a square perimeter with rounded corners, the mini-computer stand comprising:”
[1.1]	“a top configured for placement of the mini-computer; and”
[1.2]	“a perimeter that is square with a plurality of rounded corners,”
[1.3]	“wherein a back corner from the plurality of rounded corners of the mini-computer stand comprises a cutaway in top and side portions of the back corner that does not extend through a bottom side of the mini-computer stand, which is adapted to expose a corresponding back bottom portion of the mini-computer through the cutaway when the mini-computer is placed on the top of the mini-computer stand. ”
[2.0]	“The mini-computer stand of claim 1, further comprising”
[2.1]	“data ports on a front side of the mini-computer stand to form a hub, wherein the front side is opposite a back side of the mini-computer stand that includes the back corner.”
[3.0]	“The mini-computer stand of claim 2,”
[3.1]	“wherein the front side of the mini-computer stand comprises a USB data port.”
[4.0]	“The mini-computer stand of claim 1, further comprising”
[4.1]	“a front side and an opposite back side that includes the back corner; and a data port on the front side and another data port on the back side of the mini-computer stand to form a hub.”

[5.0]	“The mini-computer stand of claim 1,”
[5.1]	“wherein: the back corner has a) a first height that defines a beginning of the cutaway in the side portions and b) a second height that defines an end of the cutaway in the side portions; the mini-computer stand has a stand height that is a sum of the first height and the second height; and the second height is greater than the first height.”
[6.0]	“The mini-computer stand of claim 1,”
[6.1]	“wherein the back corner comprises a horizontally curved surface that defines the cutaway in the top and the side portions of the back corner.”
[7.0]	“The mini-computer stand of claim 1, further comprising”
[7.1]	“a plurality of feet coupled to the bottom side of the mini-computer stand that is opposite the top.”
[8.0]	“A computer system comprising the mini-computer and the mini-computer stand of claim 1,”
[8.1]	“wherein the mini-computer comprises the perimeter that is square with rounded corners, further wherein the perimeters of the mini-computer and the mini-computer stand are substantially the same size so that when placed on the mini-computer stand, the mini-computer stand enables access to the back bottom portion of the mini-computer through the cutaway.”

I. MANDATORY NOTICES

A. Real Party in Interest

The real parties-in-interest, pursuant to 37 C.F.R. § 42.8(b)(1), are America Ugreen Limited (“Petitioner”), having a place of business at 108 WEST 13TH ST WILMINGTON, DE, 19801, USA, and Shenzhen Ugreen Technology Co., Ltd., having a place of business at 4F, Building 6 & 1F-6F, Building 7, YuAn Zone, Gaofeng Community, Dalang Street, Longhua District, Shenzhen, Guangdong 518000, China.

B. Related Matters

Petitioner is not aware of any other proceedings related to the ’567 Patent.

C. Lead And Back-Up Counsel and Service Information

Petitioner provides the following designation of counsel, to which all correspondence should be addressed.

Lead Counsel	Backup Counsel
Hao Tan (Reg. No. 73,711) ARCH & LAKE LLP 203 N LaSalle Street, Suite 2100 Chicago, Illinois 60601 Telephone: (312) 375-9408 Facsimile: (312) 614-1873 Email: haotan@archlakelaw.com	Shen Wang (Reg. No. 71,847) Zhangyuan Ji (Reg. No. 800,046) Christopher Fahy (PHV to be submitted) ARCH & LAKE LLP 203 N LaSalle Street, Suite 2100 Chicago, Illinois 60601 Telephone: (636) 235-5390 Facsimile: (312) 614-1873 Email: shenwang@archlakelaw.com

D. Payment of Fees (37 C.F.R. § 42.203)

The required fee for this Petition for Post-Grant Review (“Petition”) is submitted herewith in accordance with 37 C.F.R. §§ 42.15(b) and 42.203. The undersigned authorizes the Patent and Trademark Office to charge Deposit Account No. 60-2239 for the fee set forth in 37 C.F.R. § 42.15(b) for this Petition. The Office is further authorized to charge any additional fees that may be due in connection with this proceeding, or credit any overpayment, to Deposit Account No. 60-2239.

II. GROUNDS FOR STANDING AND IDENTIFICATION OF CHALLENGE

A. Standing

Petitioner certifies that U.S. Patent No. 12,436,567 (the “’567 Patent”) is available for Post-Grant Review (“PGR”). The ’567 Patent is subject to the first-inventor-to-file provisions of the Leahy-Smith America Invents Act (“AIA”) because it has an effective filing date on or after March 16, 2013. This Petition is filed within nine months of the issuance of the ’567 Patent. Petitioner further certifies that it is not barred or estopped from requesting a PGR challenging the patent claims on the grounds identified herein.

B. Identification of Challenge Under 37 C.F.R. § 42.204(b) and Relief Requested

Petitioner requests PGR of Claims 1–8 of the ’567 Patent (the “Challenged Claims”). PGR of the Challenged Claims is requested in view of the following:

Ground	Basis	Challenged Claims	Reference(s)
1	§103	1-3, 5-7	Ye, Apple, Koshiishi
2	§103	2, 8	Ye, Apple, Koshiishi, Satechi
3	§103	4	Ye, Apple, Koshiishi, Liao
4	§103	1-8	Liao, Apple, Koshiishi
5	§103	2, 8	Liao, Apple, Koshiishi, Satechi
6	§103	1–3, 5, 8	Satechi, Apple, Shen
7	§103	4, 7	Satechi, Apple, Shen, Liao
8	§103	6	Satechi, Apple, Shen, Koshiishi
9	§112	6	indefinite in view of the term “horizontally curved surface”

As explained in Sections III below, each reference listed in the preceding table qualifies as prior art under 35 U.S.C. § 102.

C. Claim Construction

Petitioner submits that all claim terms should be construed according to the *Phillips* standard. *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005); 37 C.F.R. § 42.200(b).

For purposes of this Petition, Petitioner submits that no formal construction of the terms in Claims 1–5 and 7–8 is necessary in this proceeding because “claim terms need only be construed to the extent necessary to resolve the controversy.” *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011). However, as detailed in Ground 9, Petitioner maintains that the term “horizontally curved surface” in Claim 6 is indefinite and fails to provide objective boundaries with reasonable certainty. To the extent the Board determines the term is amenable to construction, or adopts any construction that would preserve Claim 6, Petitioner has alternatively analyzed Claim 6 under any such reasonable interpretation in Grounds 1, 4, 6, and 8.

Petitioner reserves the right to respond to any constructions offered by the Patent Owner or adopted by the Board. Furthermore, Petitioner is not waiving any arguments concerning other grounds that can only be raised in district court.

D. How The Challenged Claims Are Unpatentable and Evidence Supporting Challenge

The challenged claims are unpatentable for the reasons set forth in detail in Section III below. This Petition is accompanied by the expert declaration of Dr.

Himanshu Pokharna (Ex. 1003), who is fully qualified to opine on the technology at issue and provides detailed evidence supporting the unpatentability of the Challenged Claims. Relevance of the evidence, including identifying the specific portions of the evidence that support the challenge, may be found in the following sections.

III. THE CHALLENGED CLAIMS ARE UNPATENTABLE

A. Background of the Field

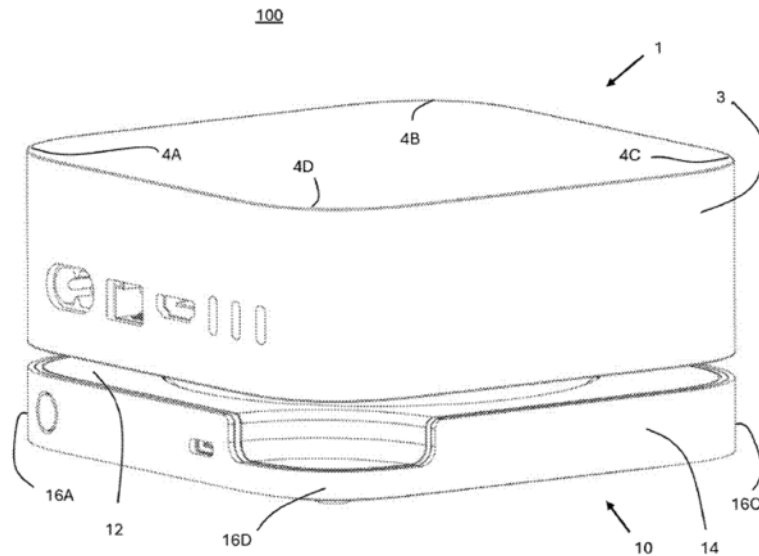
The '567 Patent relates to the field of peripheral support structures and accessories for electronic devices, specifically stands, hubs, and docking stations designed for use with mini-computers like the Apple Mac mini. Ex. 1001, 1:14-17; Ex. 1003, ¶ 35.

Well before the earliest claimed priority date of the '567 Patent, it was common in the industry to use docking bases and stands to elevate, support, and expand the connectivity of mini-computers. Ex. 1003, ¶ 36. Because accessories in this field are explicitly designed to pair with specific consumer devices, a primary engineering objective when designing a stand is ensuring structural and functional compatibility with the target mini-computer. *Id.* This includes matching the physical footprint of the stand to the computer, optimizing the placement of external data ports to reduce wire clutter, and ensuring that the stand does not block physical or

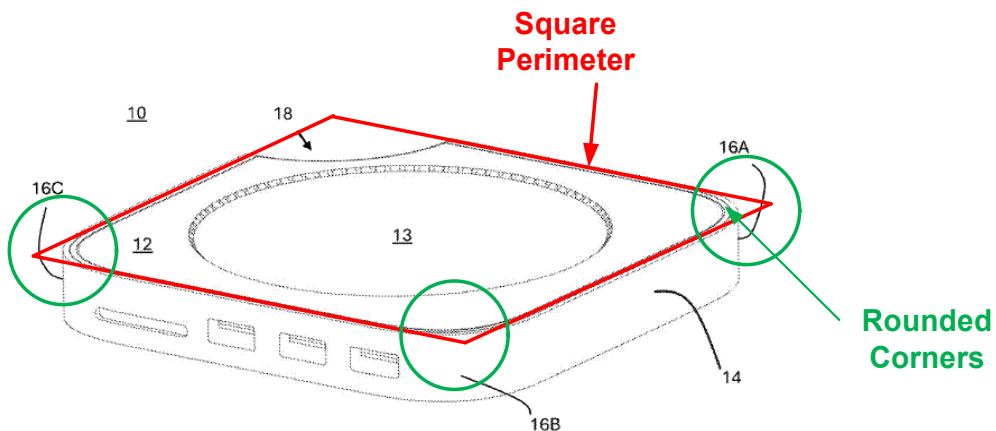
visual access to the computer's underlying features, such as exhaust vents, lighting indicators, or power buttons. *Id.*

B. Overview of the Alleged Invention

The '567 Patent is directed to a “stand for use with a mini-computer.” Ex. 1001, Abstract, FIG. 1; Ex. 1003, ¶ 37. Independent Claim 1 recites a mini-computer stand comprising a top configured for placement of the mini-computer and a perimeter that is square with a plurality of rounded corners. Ex. 1003, ¶ 37. The central feature of the alleged invention is that a “back corner” of the stand comprises a “cutaway in top and side portions... that does not extend through a bottom side” of the stand. Ex. 1001, Claim 1. The claim specifies that this cutaway is adapted to “expose a corresponding back bottom portion of the mini-computer... when the mini-computer is placed on the top of the mini-computer stand.” Ex. 1001, Claim 1; Ex. 1003, ¶ 37.



Reproduced FIG. 1 of the '567 Patent



Annotated FIG. 3A of the '567 Patent

The dependent claims add routine structural and utility modifications to this basic stand design. Ex. 1003, ¶ 38. Claims 2, 3, and 4 add data ports on the front and/or back sides to form a hub. Claim 5 recites relative heights of the cutaway. Claim 7 adds a plurality of feet to the bottom of the stand. Claim 8 recites a computer

system comprising the mini-computer and the stand, wherein their perimeters are substantially the same size. Ex. 1001, Claims 2-8; Ex. 1003, ¶ 38.

C. The Level of Skill in the Art

A person of ordinary skill in the art (“POSITA”) at the time of the alleged invention would have had a bachelor’s degree in mechanical engineering, industrial design, or a closely related field, along with at least two or more years of work experience designing and manufacturing support structures, housings, or peripheral accessories for consumer electronics. Ex. 1003, ¶ 33. Additional education could substitute for practical experience, and vice versa. *Id.*

D. Principles of Law

A claim is indefinite under § 112 when, viewed in light of the specification and prosecution history, fails to inform those skilled in the art about “the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S.Ct. 2120, 2129 (2014).

A claim is unpatentable under § 103(a) 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).

Prior art can be used to show the obviousness of a patent if the reference is “analogous art” to the patent, which means (1) the reference is from the same field of endeavor as the patent, regardless of the problem addressed or, (2) if the reference is not within the field of endeavor, it is reasonably pertinent to the particular problem with which the patent’s inventor was addressing. *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). The field of endeavor is determined by reference to explanations of the alleged invention’s subject matter in the patent application, including the embodiments, function, and structure of the claimed invention. *Id.* at 1325–26. A reasonably pertinent reference is one that—although it may be in a different field of endeavor—logically would have commended itself to an inventor’s attention in considering his problem because of the matter with which it deals. *Sci. Plastic Prod., Inc. v. Biotage AB*, 766 F.3d 1355, 1359 (Fed. Cir. 2014).

When evaluating obviousness, the analysis is objective and flexible, driven by common sense and the ordinary creativity of a POSITA. *KSR*, 550 U.S. at 420–21. A POSITA is not an automaton, and “in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *Id.* at 420. Accordingly, when a patent claims a combination of elements already known in the art, that patent should be deemed obvious if, at the time of the alleged invention, a POSITA would have had a reason to combine those known elements in the manner claimed by the patent. *Id.* at 416–18.

A “reason to combine” can be found if the combination is “a predictable variation” of what was already known in the art, or uses a technique that “has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way.” *Id.* at 417. The reason to combine can also be found in the “interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art.” *Id.* at 418. Furthermore, “[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp.” *Id.* at 421.

E. Ground 1: Claims 1-3 and 5-7 are Rendered Obvious over Ye in View of Apple, and Koshiishi

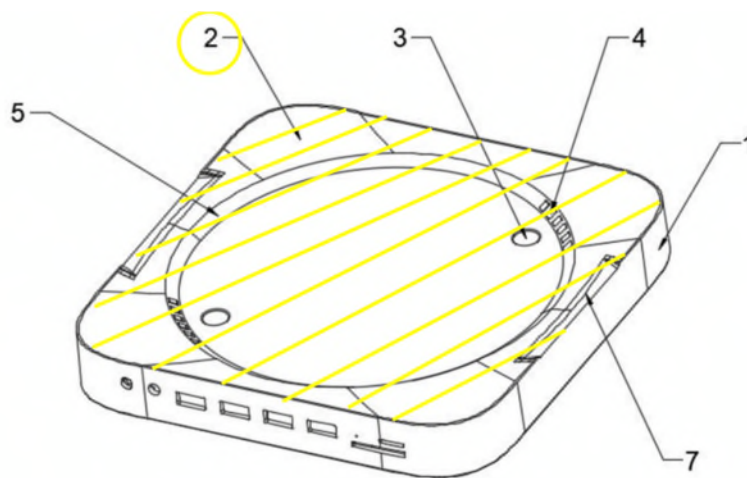
Claims 1-3 and 5-7 are unpatentable because they are obvious in view of Ye, Apple, and Koshiishi. In particular, each and every element of Claims 1-3 and 5-7 is disclosed by Ye, Apple, and Koshiishi, and a POSITA would have had reason to combine them.

1. Ye

Ye discloses “a base docking station of a desktop computer, comprising a docking station body as a base and used to place the desktop computer. The docking station body is equipped with a cooling fan, and is provided with an air outlet and

an air inlet. The air outlet and the air inlet form a convection duct to dissipate heat from the desktop computer.” Ex. 1005, [0005]; Ex. 1003, ¶ 43.

In particular, Ye’s FIG. 1 illustrates “a base docking station for a desktop computer comprises a docking station body 1. The top surface of the docking station body 1 is defined as a placement surface 2 and used for the desktop computer.” Ex. 1005, [0023]; Ex. 1003, ¶ 44. In Ye, “the docking station for a host is mainly adapted to an MAC mini” “which can allow the desktop computer to be stably placed on the docking station body 1.” Ex. 1005, [0024]; Ex. 1003, ¶ 44.



Annotated FIG. 1 of Ye

Ye qualifies as prior art under 35 U.S.C. §§ 102(a)-(b) because it was issued on May 17, 2022, which is more than one year before the ’567 Patent’s earliest claimed priority date of October 31, 2024. Ex. 1005 at [45]; Ex. 1001 at [63].

Ye is analogous art to the ’567 Patent because it is from the same field of endeavor as the ’567 Patent. Ex. 1003, ¶ 46. Specifically, the ’567 Patent is directed

to “a stand for use with a mini-computer” and Ye is directed to “a base docking station for desktop computers” and “the docking station for a host is mainly adapted to an MAC mini.” *See* Ex. 1001; 1:14-17, Claim 1; Ex. 1005, [0001], [0024]; Ex. 1003, ¶¶ 45, 46. Thus, both the ’567 Patent and Ye are in the same field of endeavor as they are both specifically directed to peripheral support structures, namely stands or docking bases, designed to accommodate and hold desktop computers like the Mac mini. *Id.*

2. Apple

Apple discloses Mac Mini M4, released by Apple Inc. on October 29, 2024, which is a mini-computer that has a square perimeter with rounded corners. Ex. 1006, figure in p. 2; Ex. 1003, ¶¶ 47-49. In the Mac Mini M4, the power button for the device is located on the bottom. *Id.* Ex. Specifically, the power button is located on the rear left of the Mac Mini M4 when looking at the front of the machine, below three Thunderbolt ports. *Id.*



Annotated Figure of Apple

Apple qualifies as prior art under 35 U.S.C. §102(a) because it was published on October 29, 2024, which is before the '567 Patent's earliest possible priority date of October 31, 2024. Even assuming, without conceding, that each Challenged Claim is entitled to the October 31, 2024 filing date, Apple and corroborating October 29 publications still predate that date. Ex. 1001 at [63]; Ex. 1006, p. 1.

In addition to the publish date of "October 29, 2024" shown in Apple. A capture from the Wayback Machine¹ proves that the exact same content was available on October 29, 2024. Ex. 1013; Ex. 1003, ¶ 50. The capture's URL has a

¹ "The Wayback Machine® provides the ability to view and browse internet information that may no longer be available on the original website." MPEP 2128 II.E.

time stamp including “20241029152102,” which encodes year/month/day/hour/minute/second the capture was made, and the original website URL. *Id.* The authenticity of Ex. 1013 is further confirmed by an affidavit from a records processor at the Internet Archive (Ex. 1020), who attests under penalty of perjury that the Wayback Machine’s archived copy of the Apple Mac Mini M4 page at the URL and date reflected in the time stamp is a true and accurate copy of the content as it existed on the Internet Archive’s servers on October 29, 2024. Ex. 1020. The affiant explains the Internet Archive’s archiving procedures, the meaning of the extended URL time code, and confirms that the screenshots attached to the affidavit correspond to the archived record. *Id.* The Patent Office has found that “[p]ublications obtained via the Wayback Machine® are prima facie deemed to be publicly accessible at the date and time provided in the time stamp.” MPEP 2128 II.E; *see also Valve Corp. v. Ironburg Inventions Ltd.*, 8 F.4th 1364, 1374-75, (Fed. Cir. 2021) (relying on Wayback Machine to establish date of publication).

Moreover, multiple publications and posts dated October 29, 2024 support that the design of Mac Mini M4 as shown in Apple was publicly accessible on or before October 29, 2024, including the location of the power button. Exs. 1014-1019; Ex. 1003, ¶ 51. For example, “M4 Mac Mini’s Power Button Has New Bottom

Location” by Juli Clover² included the following figure and criticized the button placement of Mac Mini M4: “[a]s it turns out, the power button for the device is located on the bottom, so as Mr. Macintosh pointed out, you’ll need to tip the Mac mini up in order to turn it on (or off, using the physical button).” Ex. 1014, p. 1; Ex. 1003, ¶ 51.



Reproduced figure in Ex. 1014

² During prosecution, Examiner relied on Exhibit 1014 in a § 103 obviousness rejection in the non-final office action dated May 7, 2025. Ex. 1002, pp. 222-23. Notably, Patent Owner never contested the publication date or prior art status of this reference. Ex. 1002.

Thus, there is sufficient evidence that the specific design and features displayed in Apple, including the Mac mini M4's form factor and the bottom-mounted power button location, were publicly known and available prior to the '567 Patent's earliest claimed October 31, 2024. Ex. 1003, ¶ 52.

Apple is analogous art to the '567 Patent because it is from the same field of endeavor as the '567 Patent. Ex. 1003, ¶ 53. In particular, the '567 Patent is directed to “a stand for use with a mini-computer” and Apple is directed to a mini-computer, i.e., Mac Mini M4. *See* Ex. 1001, Abstract, Claim 1, and 1:14-17; *see also* Ex. 1006, p. 1; Ex. 1003, ¶ 53. Thus, both Apple and the '567 Patent are in the same field of endeavor, namely, mini-computer systems and accessories designed for use with such devices. Ex. 1003, ¶ 53.

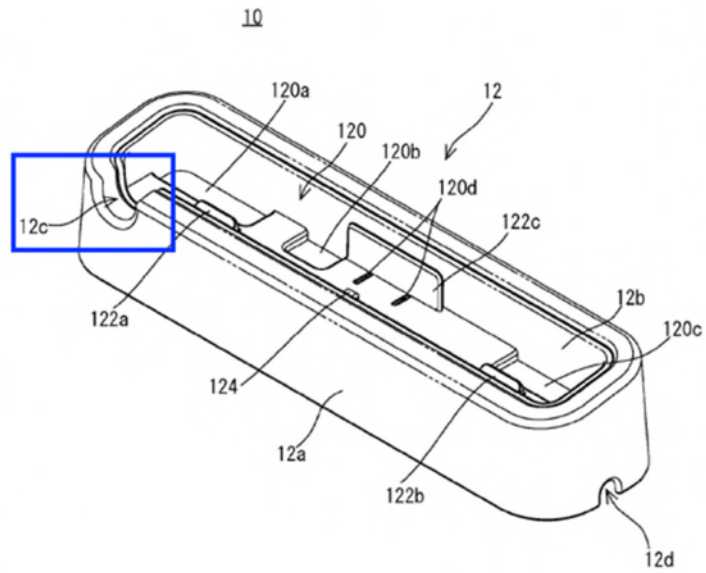
Apple is also analogous art because it is reasonably pertinent to the particular problem addressed by the '567 Patent. Ex. 1003, ¶¶ 54, 55. The '567 Patent addresses the problem of designing a stand that supports a mini-computer without obstructing access to its physical features. Ex. 1001, 1:66-2:16; Ex. 1003, ¶ 54. Apple discloses the Mac mini M4, which defines the precise physical constraints—namely, a square footprint and a bottom-mounted power button—that the stand must accommodate. Ex. 1006, figure in p. 2; Ex. 1003, ¶ 54. Therefore, Apple would have logically commended itself to the inventor's attention when solving the problem of

designing a compatible stand that maintains access to device features, satisfying the standard for analogous art. Ex. 1003, ¶ 54, 55.

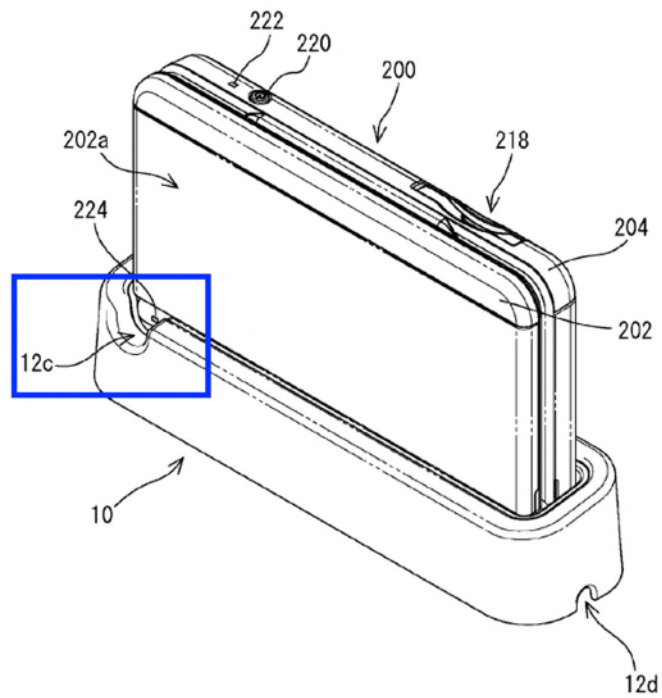
3. Koshiishi

Koshiishi discloses a charging system and charging stand charging a battery of electronic device. Ex. 1007, 1:12-13; Ex. 1003, ¶ 57. In particular, “[a] first embodiment is a charging system comprising a foldable electronic device and a charging stand that receives and charges the electronic device.” Ex. 1007, 1:22-24; Ex. 1003, ¶ 57.

In particular, Koshiishi’s FIG 1 and FIG. 6(A) illustrate a charging stand 10 including “a notch 12*c* of a semi-circle shape is formed in upper left of the main body 12 (the outer side member 12*a* and the inner side member 12*b*) in the front of the charging stand 10.” Ex. 1007, 5:57-60; Ex. 1003, ¶ 58. “[T]he charging stand further compris[es] a notch at a position corresponding to a light-emitting portion of the electronic device on a part of a side of the inserting portion when inserting the electronic device into the inserting portion.” Ex. 1007, 2:36-40; Ex. 1003, ¶ 58.



Annotated FIG. 1 of Koshiishi



Annotated FIG. 6(A) of Koshiishi

Koshiishi qualifies as prior art under 35 U.S.C. §§ 102(a)-(b) because it was issued on July 4, 2017, which is more than one year before the '567 Patent's earliest claimed priority date of October 31, 2024. Ex. 1007 at [45]; Ex. 1001 at [63].

Koshiishi is analogous art to the '567 Patent because it is from the same field of endeavor as the '567 Patent. Ex. 1003, ¶ 61. In particular, the '567 Patent is directed to “a stand for use with a mini-computer” and Koshiishi is directed to a “charging stand charging a battery of electronic device.” *See* Ex. 1001; 1:14-17, Claim 1; Ex. 1007, 1:12-13; Ex. 1003, ¶ 61. Thus, both the '567 Patent and Koshiishi are in the same field of endeavor as they are both specifically directed to stands for supporting electronic devices. Ex. 1003, ¶ 61.

Koshiishi is also analogous art because it is reasonably pertinent to the particular problem addressed by the '567 Patent. Ex. 1003, ¶ 62. The '567 Patent addresses the problem of designing a support stand that accommodates an electronic device without obstructing access to its underlying physical or visual features. Ex. 1001, 1:66-2:16; Ex. 1003, ¶ 62. Koshiishi deals with this exact challenge, disclosing a stand with a specifically placed cutaway (notch 12c) designed to expose a functional feature (a communication lamp) on the docked device. Ex. 1007, 2:36-40, FIG 1 and FIG. 6(A); Ex. 1003, ¶¶ 59-60, 62. Because Koshiishi provides a direct structural solution to the problem of preserving access to obstructed device features,

it logically would have commended itself to the inventor's attention when designing the claimed stand. Ex. 1003, ¶¶ 59-60, 62.

The relevant teaching of Koshiishi is not limited to the orientation of the supported device or to the particular identity of the exposed component. Rather, Koshiishi teaches the structural principle of locally removing an upper/side wall portion of a support body while preserving lower support material, so that a user can access or view a feature otherwise obstructed by the stand. A POSITA would have found that principle directly transferable to a horizontal Mac mini stand because the same obstruction/access problem arises when a fitted support base covers a bottom-mounted device feature. Ex. 1003, ¶ 60.

4. The Combination of Ye, Apple, And Koshiishi Discloses Every Element of Claims 1-3 And 5-7

a. Claim 1

(1)[1.0]

The preamble of claim 1 is not limiting because it merely states the purpose or intended use of the alleged invention. It does not define any of the claim limitations, which are set forth fully in the body of the claim (i.e., a mini-computer stand for use with a mini-computer that has a square perimeter with rounded corners).

To the extent the preamble is limiting, Ye discloses “a base docking station for desktop computers” and “the docking station for a host is mainly adapted to an

MAC mini.” Ex. 1005, [0001], [0024]; Ex. 1003, ¶ 64. In addition, all MAC Mini models have used a square perimeter with rounded corners. Ex. 1003, ¶ 64.

In the same field of endeavor, Apple discloses Mac Mini M4 which is a mini-computer that has a square perimeter with rounded corners. Ex. 1006, figure in p. 2; Ex. 1003, ¶ 65.



Annotated Figure of Apple

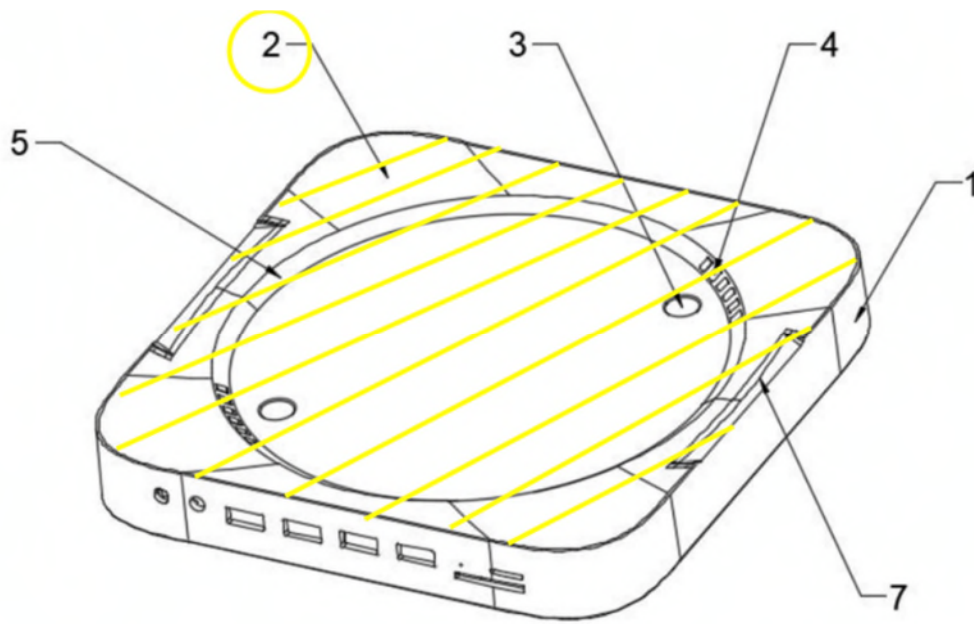
In the same field of endeavor, Koshiishi discloses a charging stand charging a battery of electronic device. Ex. 1007, 1:12-13; Ex. 1003, ¶ 66.

(2)[1.1]

Ye discloses this Element. Ex. 1003, ¶¶ 67, 70.

Specifically, Ye discloses a top surface “defined as a placement surface 2 and used for the desktop computer.” Ex. 1005, FIG. 1, [0023]; Ex. 1003, ¶ 68.

As shown in FIG. 1 (reproduced below), in one embodiment of Ye, “a base docking station for a desktop computer comprises a docking station body 1. The top surface of the docking station body 1 is defined as a placement surface 2 and used for the desktop computer. The placement surface 2 is equipped with several pads 3, and the placement surface 2 is provided with a placement groove 21 and several air outlets 4.” Ex. 1005, FIG. 1, [0023]; Ex. 1003, ¶ 69.



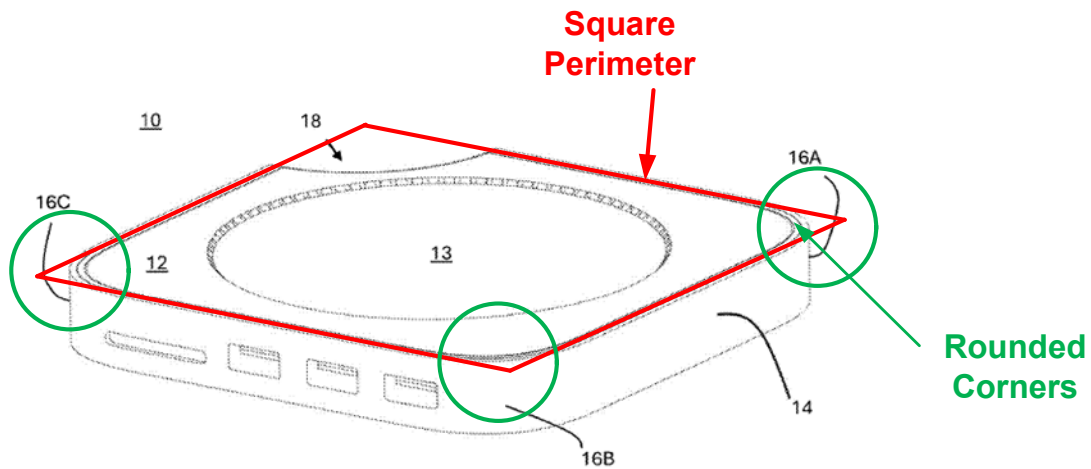
Annotated FIG. 1 of Ye

(3) [1.2]

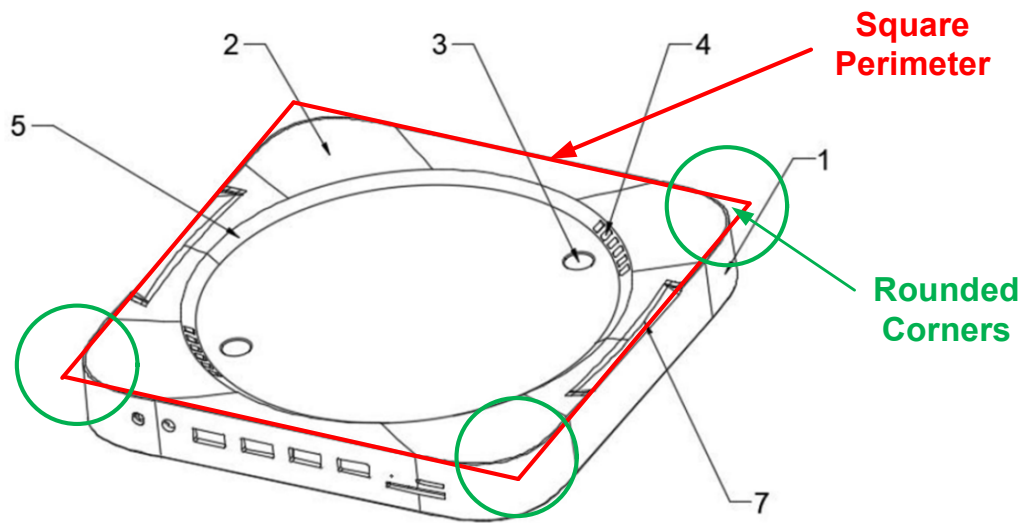
Ye discloses this Element. Ex. 1003, ¶¶ 71, 73.

Ye discloses that the base docking station has a perimeter that is square with a plurality of rounded corners. Ex. 1003, ¶ 72.

Specifically, as shown in FIG. 1 (reproduced below), Ye's base docking station has a square perimeter (annotated in red) with a plurality of rounded corners (annotated in green). Ex. 1003, ¶ 72.



Annotated FIG. 3A of the '567 Patent



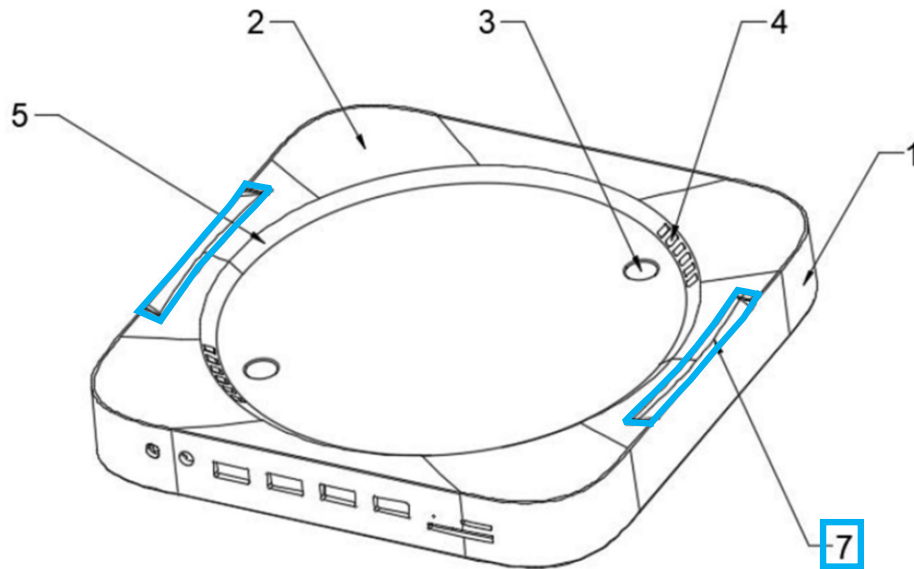
Annotated FIG. 1 of Ye

(4)[1.3]

The combination of Ye, Apple, and Koshiishi discloses this Element. Ex. 1003, ¶ 74, 87.

First, Ye discloses a cutaway in the top and side portions that does not extend through a bottom side of the base docking station because the base docking station in Ye has an exhaust port 7 at the connection between the surface and the side. Ex. 1003, ¶ 75.

Specifically, Ye discloses “the connection between the top and side surfaces of the docking station body 1 is provided with an exhaust port 7. In the implementation process, a heat dissipation fan is installed inside the docking station body 1, and the air outlet 4 and the air inlet 6 will form a convective air path. Combined with the heat dissipation fan (as well as the space or gap left by the placement groove 21), the heat dissipation effect can be improved. The exhaust port 7 not only facilitates air intake and exhaust, but also helps to separate the host from the docking station body 1.” Ex. 1005, [0024], FIG. 1; Ex. 1003, ¶ 76.



Annotated FIG. 1 of Ye

As shown above, Ye's exhaust port 7 is located at the transition between the top and side portions of the base docking station 1. Ex. 1003, ¶ 77. When a mini-computer is placed on the top of the base docking station 1, an exhaust port 7 (annotated in blue) exposes a corresponding back bottom portion of the mini-computer through the exhaust port 7. Ex. 1003, ¶ 77.

As a threshold matter, a POSITA would readily understand the physical orientation of these devices. Because a Mac mini has a designated rear or back side, placing the Mac mini on top of Ye's base docking station dictates that the base docking station will correspondingly have a front side and a back side. Ex. 1003, ¶ 78. Consequently, when aligned, there will necessarily be two back corners on the docking station from its plurality of rounded corners that correspond directly to the two back corners of the Mac mini. *Id.*

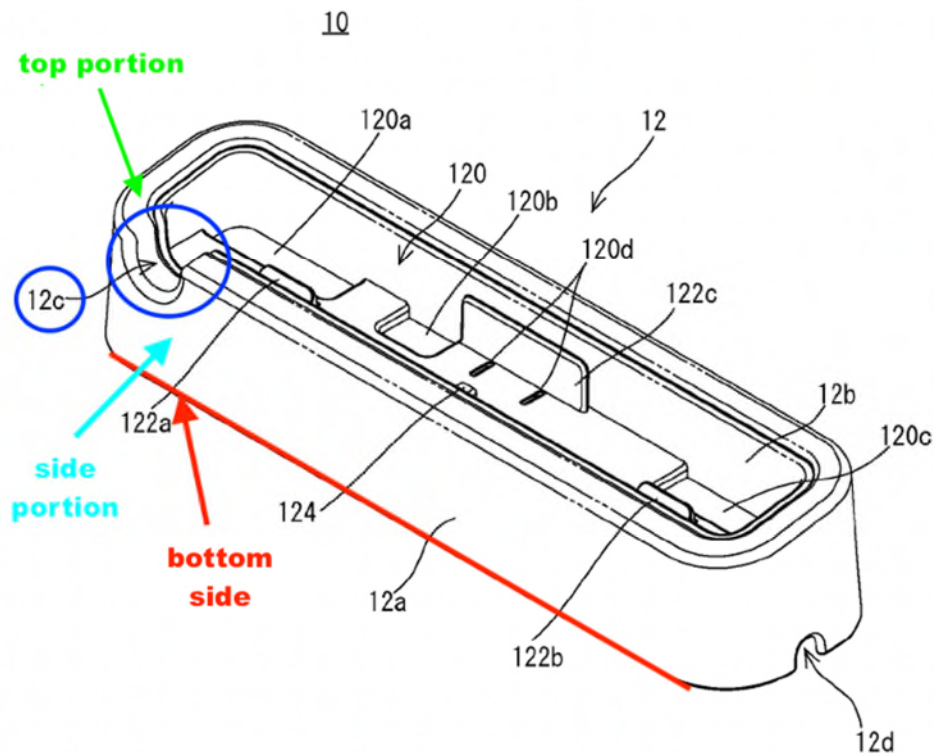
While Ye describes an exhaust port 7 in top and side portions of the base docking station, it does so without reference to a cutaway in the back corner. Ex. 1003, ¶ 78. However, Apple discloses that the power button is located on the rear left of the Mac Mini M4. Ex. 1006, figure in p. 2; Ex. 1003, ¶ 78.



Annotated Figure of Apple

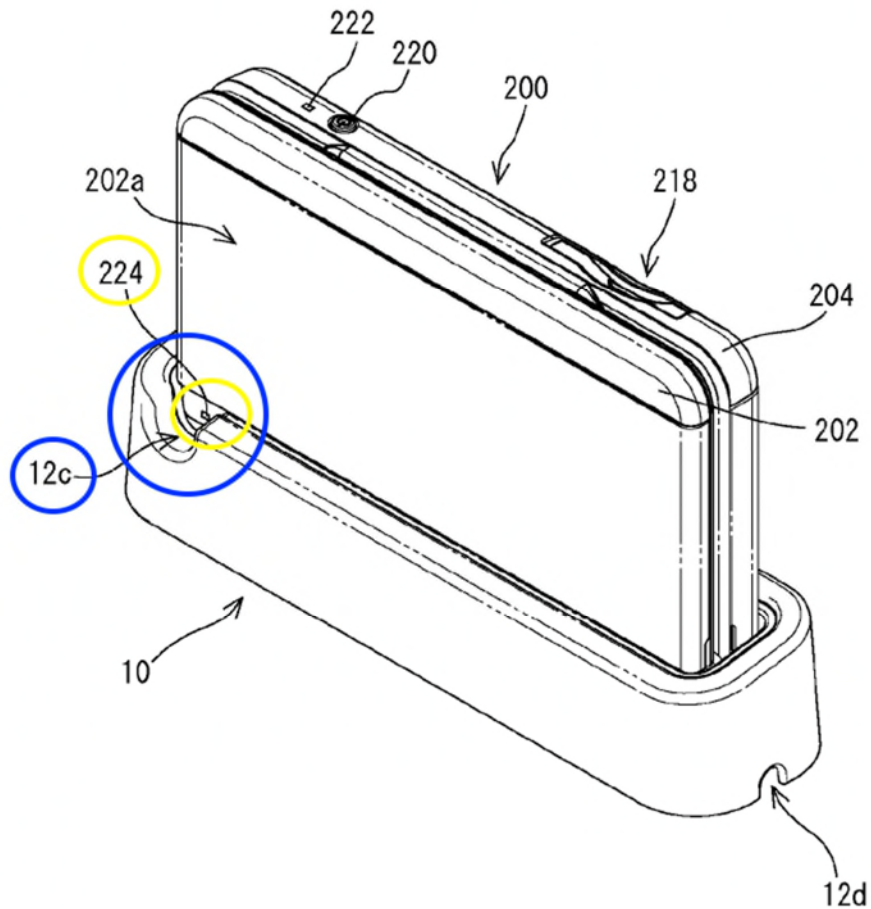
Guided by Ye’s disclosure that “the docking station for a host is mainly adapted to an MAC mini” (Ex. 1005, [0024]), a POSITA would naturally seek to use Ye’s docking station with the Mac mini M4 disclosed in Apple. Ex. 1003, ¶ 79. Because placing the Mac mini M4 on Ye’s stand obstructs the bottom rear-left power button, a POSITA would be motivated to resolve this known accessibility issue by redesigning the docking station with a dedicated power-button access feature. *Id.*

Furthermore, Koshiishi discloses a known structure: a notch 12c formed in the upper left of the main body of the charging stand, spanning top and side portions of the stand without extending through a bottom side of the stand, which is adapted to expose an underlying feature of the mini-computer through the notch 12c when the mini-computer is placed on the top of the stand. Ex. 1003, ¶¶ 59-60, 80. “As seen from FIG. 1, FIG. 2(A) and FIG. 3(A), a notch 12c of a semi-circle shape is formed in upper left of the main body 12 (the outer side member 12a and the inner side member 12b) in the front of the charging stand 10.” Ex. 1007, 5:57-60; Ex. 1003, ¶ 80.



Annotated FIG. 1 of Koshiishi

Koshiishi further explains that this structure exposes features of the mounted device: “[f]urthermore, the communication lamp 224 provided on the hinge 206 is arranged at a position that the notch 12c is provided. Therefore, even if the portable game apparatus 200 is being charged, it is possible to see the lighting, putting out light, blinking and the color of lighting (luminescence) of the communication lamp 224.” Ex. 1007, 11:23-28, FIG. 6(A); Ex. 1003, ¶ 81.



Annotated FIG. 6(A) of Koshiishi

Thus, Ye in view of Apple and Koshiishi discloses each and every limitation of [1.3]. A POSITA would have been motivated to implement Koshiishi's notch 12c

in Ye's base docking station when placing the Mac mini M4 on Ye's base docking station, that is, a cutaway to expose the back bottom portion of the mini-computer corresponding to the power button on the rear left of the Mac Mini M4, such that a user can access the power button when the mini-computer is placed on the top of the mini-computer stand. Ex. 1003, ¶¶ 82-87. As discussed in Section III.E.5 below, a POSITA would have been motivated and able to modify Ye and Apple by using Koshiishi's notch 12c, and thus reach the combination of Ye, Apple, and Koshiishi that discloses all limitations of [1.3].

b. Claim 2

(1)[2.0]

Same as Ground 1, Elements [1.0]-[1.3].

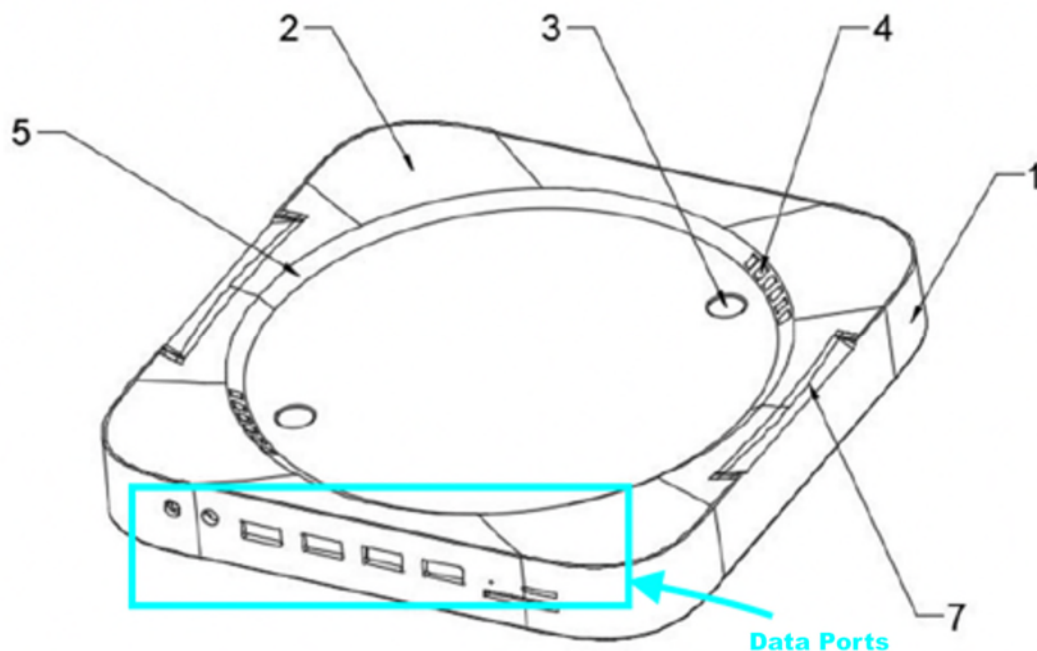
(2)[2.1]

Ye discloses this Element. Ex. 1003, ¶¶ 88, 91.

Specifically, Ye discloses that “[t]he side surface of the docking station body 1 has multiple interfaces, such as PD interface, TF/SD card interface, USB interface, power interface, etc., and corresponding indicator lights can also be provided.” Ex. 1005, [0027], FIG. 1; Ex. 1003, ¶ 89.

As illustrated in FIG. 1 (reproduced below), because a Mac mini has a designated rear or back side, when placing the Mac mini on top of Ye's base docking station, the base docking station will correspondingly have a front side and a back

side. Ex. 1003, ¶ 90. When the front side of Ye's base docking station aligns with the front side of the Mac mini, these various interfaces (corresponding to data ports in [2.1]) in Ye are positioned on the front side of the base docking station 1 to form a hub, and the front side is opposite a back side of the base docking station that includes a back corner. *Id.*



Annotated FIG. 1 of Ye

c. Claim 3

(1)[3.0]

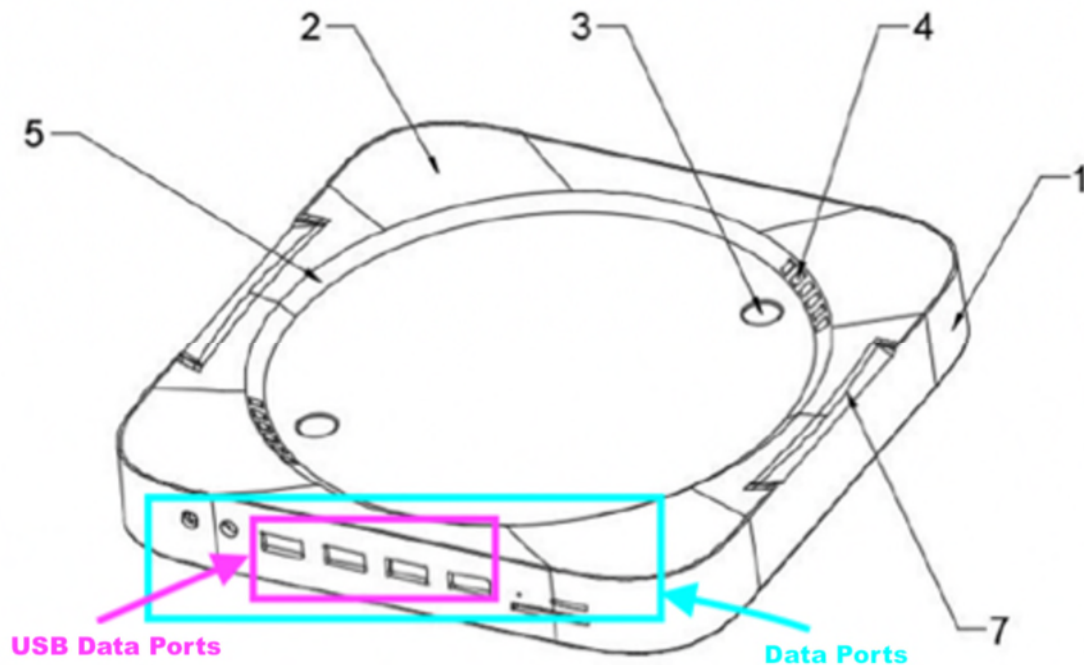
Same as Ground 1, Elements [1.0]-[1.3].

(2)[3.1]

Ye discloses this Element. Ex. 1003, ¶¶ 93, 95.

Ye discloses that the various interfaces include USB data ports positioned on the front side of the base docking station 1. Ex. 1003, ¶ 94.

Specifically, Ye describes that “[t]he side surface of the docking station body 1 has multiple interfaces, such as PD interface, TF/SD card interface, USB interface, power interface, etc., and corresponding indicator lights can also be provided.” Ex. 1005, [0027], FIG. 1; Ex. 1003, ¶ 94.



Annotated FIG. 1 of Ye

d. Claim 5

(1)/[5.0]

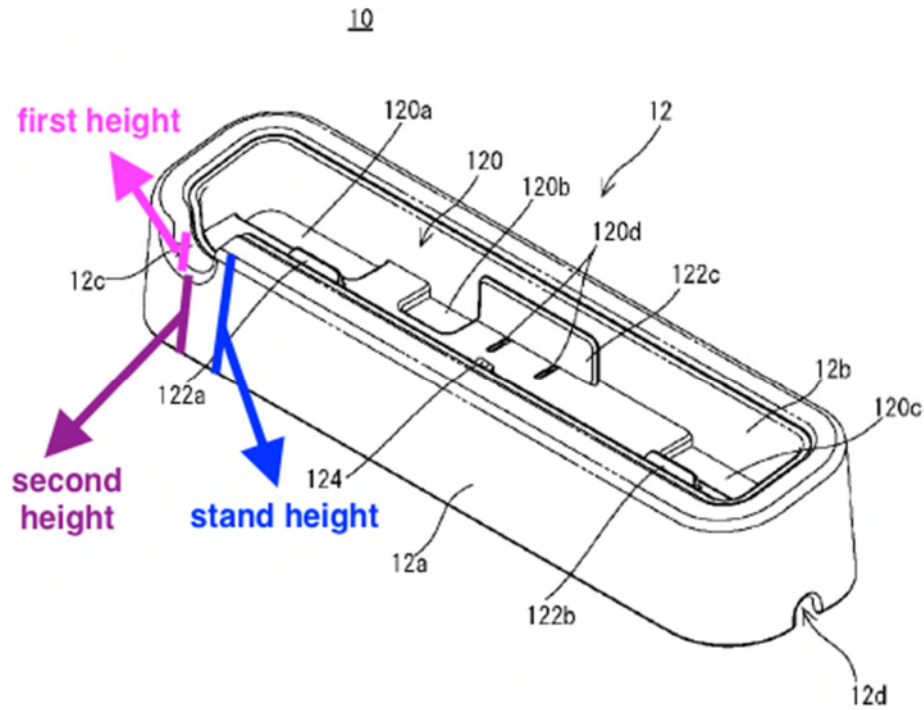
Same as Ground 1, Elements [1.0]-[1.3].

(2)[5.1]

Koshiishi discloses this Element. Ex. 1003, ¶¶ 97, 100.

Koshiishi discloses that the charging stand has a) a first height that defines a beginning of the cutaway in the side portions and b) a second height that defines an end of the cutaway in the side portions; the charging stand has a stand height that is a sum of the first height and the second height; and the second height is greater than the first height. Ex. 1007, FIG. 1; Ex. 1003, ¶ 98.

As illustrated in FIG. 1 (reproduced below) of Koshiishi, the charging stand has a first height (annotated in pink) that defines a beginning of the cutaway in the side portions and a second height (annotated in purple) that defines an end of the cutaway in the side portions. Ex. 1003, ¶ 99. The stand height (annotated in blue) of the charging stand is a sum of the first height and the second height and the second height is greater than the first height. *Id.*



Annotated FIG. 1 of Koshiishi

e. Claim 6

As detailed in Ground 9 below, Petitioner maintains that the term “horizontally curved surface” in Claim 6 is indefinite under 35 U.S.C. § 112 because it fails to inform a POSITA of the claim scope with reasonable certainty. However, to the extent the Board finds the term amenable to construction, or adopts any construction proposed by the Patent Owner to save the claim from indefiniteness, Koshiishi discloses this feature under any such reasonable interpretation. Ex. 1003, ¶ 102.

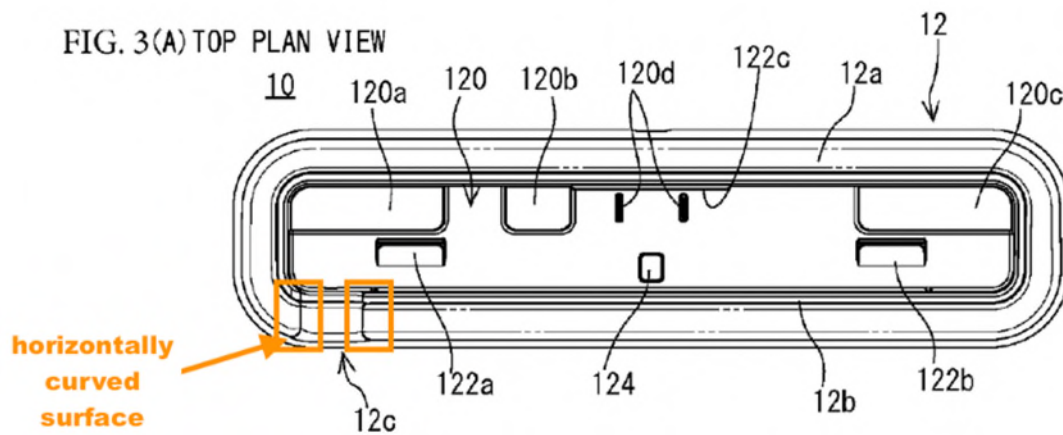
(1)[6.0]

Same as Ground 1, Elements [1.0]-[1.3].

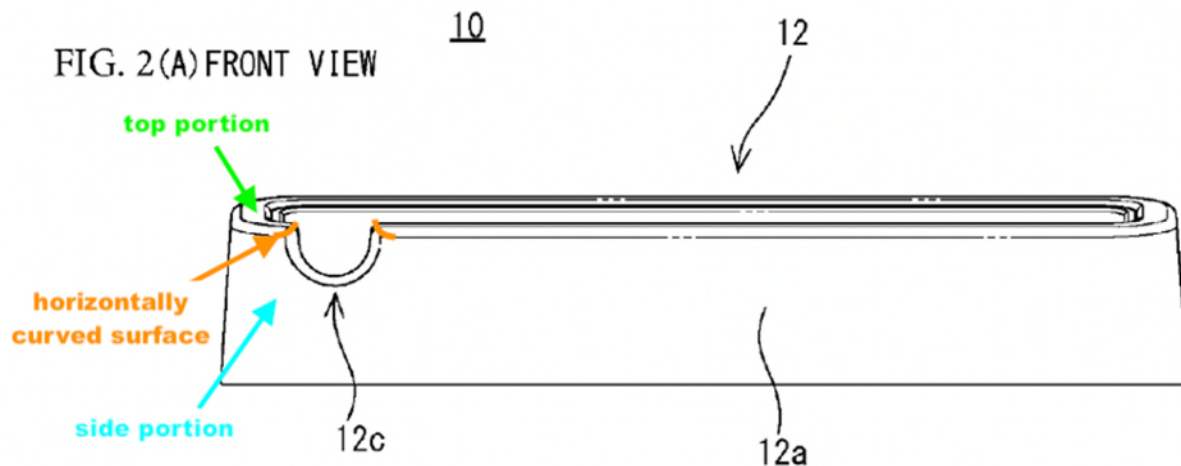
(2)[6.1]

Koshiishi discloses this Element. Ex. 1003, ¶¶ 103, 105.

As shown in FIG. 3(A) (reproduced below), Koshiishi discloses that the charging stand has a horizontally curved surface that defines the notch 12c in the top and the side portions. Ex. 1007, FIG. 3(A); Ex. 1003, ¶ 104.



Annotated FIG. 3(A) of Koshiishi



Annotated FIG. 2(A) of Koshiishi

f. Claim 7

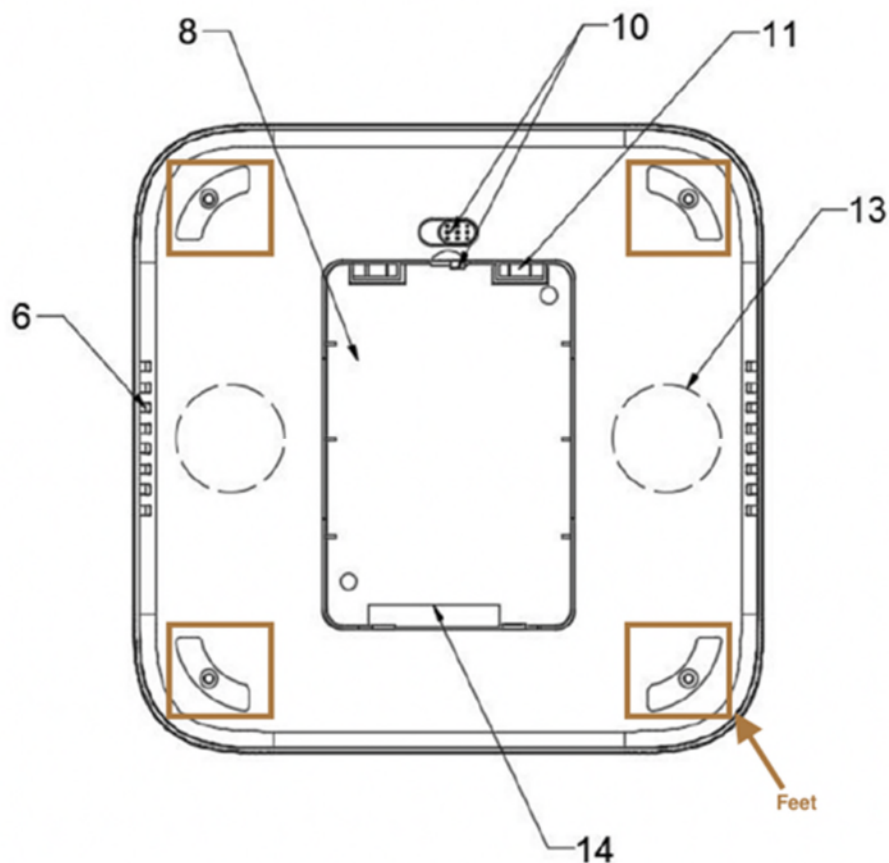
(1)[7.0]

Same as Ground 1, Elements [1.0]-[1.3].

(2)[7.1]

Ye discloses this Element. Ex. 1003, ¶¶ 107, 109.

As shown in FIG. 2 (reproduced below), Ye discloses a plurality of feet (annotated in brown) coupled to the bottom side of the base docking station that is opposite the top. Ex. 1005, FIG. 2; Ex. 1003, ¶ 108.



5. A POSITA Would Have Had Reason to Combine Ye with Apple, And Koshiishi

A POSITA would have had reason to combine Ye with Apple, and Koshiishi based on design incentives, market forces, and the predictable application of known structural techniques to solve a recognized problem. Ex. 1003, ¶ 111.

As established above, Ye, Apple, and Koshiishi are analogous art because they are from the same field of endeavor – namely, support structures and accessories for mini-computers and electronic devices – and are reasonably pertinent to the problem of accommodating structural device features within a stand. Ex. 1003, ¶ 112.

Ye teaches a base docking station specifically matched with the MAC mini. Ex. 1005; Ex. 1003, ¶ 113. Apple discloses the Mac Mini M4, released on October 29, 2024, which features a power button uniquely located on its bottom rear left corner. Ex. 1006; Ex. 1003, ¶ 113. A POSITA placing the Mac mini M4 of Apple onto Ye’s base docking station would immediately recognize a functional conflict: the docking station would block access to the power button. Ex. 1003, ¶ 113.

This accessibility problem, and its structural solution, were instantly recognized by the public and POSITAs. On October 29 and 30, 2024, public forums noted that users “can’t put a dock below the mini because of the power button” and concluded that “[i]t would be trivial to put a recess in that corner to accommodate a

finger.” Ex. 1011, pp. 2, 7; Ex. 1003, ¶ 114. This constitutes contemporaneous evidence that market-driven design needs prompted an obvious, predictable variation. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007) (The Supreme Court held that “design incentives and other market forces can prompt variations of [known devices],” and that “if a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability.”)

To implement this “trivial” recess, a POSITA would look to known support structures in the same field of endeavor. Koshiishi teaches providing a notch or cutaway in the periphery of a charging stand to expose underlying device features (specifically, a light-emitting portion), Ex. 1007, 11:23-28, FIG. 6(A); Ex. 1003, ¶ 115. Because a POSITA is a person of ordinary creativity, not an automaton, they would readily recognize that Koshiishi’s peripheral cutaway technique is readily transferable to any stand that needs to preserve physical or visual access to an underlying device feature. Ex. 1003, ¶ 115. Furthermore, this modification represents the application of a known technique (Koshiishi’s method of providing a cutaway in the top and side portions that does not extend through the bottom) to a known device ready for improvement (Ye’s base docking station). Ex. 1003, ¶ 115.

Even considering the minor differences in style between Koshiishi, an insertion-style stand holding a device vertically, and Ye, a flat stacking-style dock, such minor distinctions would not deter a POSITA. Ex. 1003, ¶¶ 116-119. The test

for obviousness is not whether the structures of two references can be bodily incorporated into one another, but whether a POSITA would be motivated to apply the teachings of the secondary reference to the primary one. *See In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012) (“It is well-established that a determination of obviousness based on teachings from multiple references does not require an actual, physical substitution of elements”); *see also Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1380–81 (Fed. Cir. 2023) (reversing the Board for erroneously requiring a physical combination of components and reaffirming that an obviousness analysis “does not require an actual, physical substitution of elements”).

Here, Koshiishi teaches the structural principle of forming a partial-depth notch (12c) on an upper peripheral edge to expose an obstructed functional feature, without that notch extending through the bottom side of the stand (as clearly shown in Koshiishi Fig. 2(A)). Ex. 1003, ¶ 116. A POSITA would readily recognize that this localized notching technique is orientation-agnostic and would seamlessly apply it to the upper back corner of Ye’s flat docking station to accommodate the Mac mini M4’s power button, yielding the claimed structure. Ex. 1003, ¶ 116.

Under *KSR*, “[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp.” *KSR*, 550 U.S. at 421. Because the location of the M4 power button

was fixed by Apple, placing a corner cutaway corresponding to that exact location using Koshiishi's teachings represents routine engineering design among a finite number of predictable solutions. Ex. 1003, ¶ 117. *See Shockwave Medical, Inc. v. Cardiovascular Systems, Inc.*, 142 F.4th 1371, 1384 (Fed. Cir. 2025) (reversing the Board and finding that modifying a device is a routine design choice "when there are a limited number of well-known design choices in the prior art").

A POSITA would have had a reasonable expectation of success in modifying Ye with Koshiishi's notch, as doing so requires only standard manufacturing techniques and does not alter the primary supporting function of Ye's base. Ex. 1003, ¶¶ 116-119; *see also Godbersen-Smith Constr. Co. v. Guntert & Zimmerman Const. Div., Inc.*, IPR2020-01698, Paper 80 at 24 (PTAB Apr. 12, 2022) (finding that "a person having ordinary skill in the art would have had a reasonable expectation of success in combining Rio's teachings of steering a crawler track with a rotary actuator, including positioning the rotary actuator at the bottom of a jacking column" and that "the record does not include any evidence that the redesign, torque, and backlash issues identified by Patent Owner are beyond the level of ordinary skill").

Ultimately, this predictable variation yields the expected result of maintaining device support while enabling finger access to the power button. Ex. 1003, ¶¶ 116-119; *see also Tokai Corp. v. Easton Enters., Inc.*, 632 F.3d 1358 (Fed. Cir. 2011) (finding that "[t]he only missing claim limitation – the intended position of the finger

and thumb when using the lighter – is nothing more than a predictable variation on the prior art”).

F. Ground 2: Claims 2 and 8 are Rendered Obvious over Ye in View of Apple, Koshiishi, And Satechi

While the combination of Ye, Apple, and Koshiishi renders independent Claim 1 obvious by addressing the physical accessibility of the Mac mini M4’s power button, dependent claims 2 and 8 introduce routine utility and design enhancements—specifically, strategic data port placement and precise footprint sizing. Ex. 1003, ¶ 139. To the extent the primary combination does not explicitly detail these limitations, a POSITA would have been motivated to incorporate the teachings of Satechi. Ex. 1003, ¶ 139.

Claims 2 and 8 are unpatentable because they are obvious in view of the combination of Ye, Apple, Koshiishi, and Satechi. In particular, each and every element of Claims 2 and 8 is disclosed by Ye, Apple, Koshiishi, and Satechi, and a POSITA would have had reason to combine them.

1. Satechi

Satechi discloses a “Type-C Aluminum Stand & Hub – USB-C Data Port, Micro/SD Card Readers, USB 3.0 & Headphone Jack Port - Compatible with Mac Mini (2018 & Later)” configured to support a mini-computer, e.g., a Mac mini, having a square perimeter with rounded corners. Ex. 1008, p. 1, figures in p. 3; Ex. 1003, ¶ 120.



Annotated Figure of Satechi



Annotated Figure of Satechi

Satechi qualifies as prior art under 35 U.S.C. §§102(a)-(b) because it was first listed on October 7, 2019, which is more than one year before the '567 Patent's earliest claimed priority date of October 31, 2024. Ex. 1001 at [63]; Ex. 1008, p. 5.

In addition to Satechi's "Date first listed on Amazon" of October 7, 2019, the URL of capture has a time stamp including "20200313192257," which is the year/month/day/hour/minute/second the capture was made, and the URL of the original website. Ex. 1008; Ex. 1003, ¶ 121. The authenticity of Ex. 1008 is further confirmed by an affidavit from a records processor at the Internet Archive (Ex. 1020), who attests under penalty of perjury that the Wayback Machine's archived copy of the Satechi Amazon listing (ASIN B07YSWZNNW) at the URL and date reflected in the time stamp is a true and accurate copy of the content as it existed on the Internet Archive's servers on March 13, 2020. Ex. 1020. The affiant explains the Internet Archive's archiving procedures, the meaning of the extended URL time code, and confirms that the screenshots attached to the affidavit correspond to the archived record. *Id.* The Patent Office has found that "[p]ublications obtained via the Wayback Machine® are prima facie deemed to be publicly accessible at the date and time provided in the time stamp." MPEP 2128 II.E; *see also Valve Corp.*, 8 F.4th at 1374-75 (relying on Wayback Machine to establish date of publication).

Moreover, Satechi's Amazon listing includes multiple verified customer reviews dated well before the '567 Patent's earliest claimed October 31, 2024. Ex.

1008, pp. 5, 8; Ex. 1003, ¶¶ 122-124. As the Board recently noted in *Next Step*, customer reviews dated before the critical date can serve as evidence of prior public availability. *See Next Step Grp., Inc. v. Deckers Outdoor Corp.*, IPR2024-00525, Paper 16 at 14 (PTAB Aug. 6, 2024) (finding the petitioner’s reliance on Amazon reviews insufficient only because “none of the reviews dated prior to the critical date contain any images of the product”). Unlike the deficient evidence in *Next Step*, the pre-critical-date reviews relied upon by Petitioner here explicitly include user-uploaded images of the product. Ex. 1008, pp. 5, 8; Ex. 1003, ¶ 122. These contemporaneous photographs provide sufficient, corroborated evidence that the specific design and features displayed in Satechi were publicly known and available prior to the ’567 Patent’s earliest claimed October 31, 2024. Ex. 1003, ¶¶ 122-124.

Satechi is analogous art to the ’567 Patent because it is from the same field of endeavor as the ’567 Patent. Ex. 1003, ¶ 125. In particular, the ’567 Patent is directed to “a stand for use with a mini-computer” and Satechi is directed to a stand or hub compatible with Mac Mini. *See* Ex. 1001 at Abstract, Claim 1, and 1:14-17; *see also* Ex. 1008, p. 1; Ex. 1003, ¶ 125. Thus, both Satechi and the ’567 Patent are in the same field of endeavor, namely, stands and hub accessories designed to support and interface with mini-computers. Ex. 1003, ¶ 125.

2. The Combination of Ye, Apple, Koshiishi, And Satechi Discloses Every Element of Claims 2 And 8

a. Claim 2

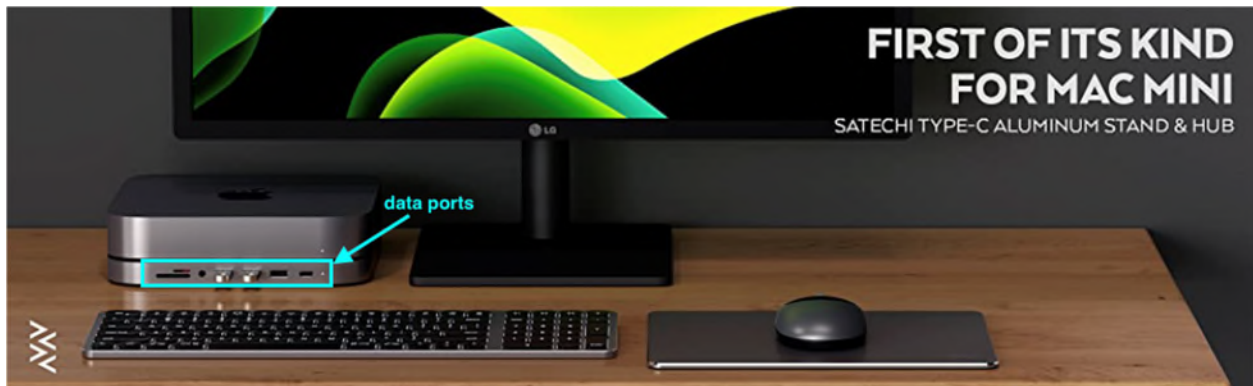
(1)[2.0]

Same as Ground 1, Elements [1.0]-[1.3].

(2)[2.1]

Ye discloses the front side is opposite a back side of the mini-computer stand that includes the back corner as required in [2.1]. Independent from Ye's disclosure, Petitioner respectfully submits that Satechi discloses this Element. Ex. 1003, ¶¶ 126, 130.

Specifically, Satechi discloses a stand or hub compatible with Mac Mini having data ports positioned on the front side of the mini-computer stand. Ex. 1008, p. 1; Ex. 1003, ¶ 127. Specifically, Satechi discloses that the stand “[f]eatures an USB-C data port, three USB 3.0 ports, micro/SD card readers, and a 3.5 mm headphone jack port for convenient access to your essential peripherals.” Ex. 1008, p. 3; Ex. 1003, ¶ 127. As shown below, the data ports are located on the user-facing front side opposite a back side of the stand, which includes a back corner corresponding to a back bottom portion of the mini-computer, so that the users can easily access the data ports when the mini-computer is placed onto the stand. Ex. 1008, figure in p. 2; Ex. 1003, ¶ 127.



Annotated Figure of Satechi

A POSITA would understand that this front side is opposite a back side of the stand, and that the back side includes a back corner corresponding to a back bottom portion of the mini-computer, so that the users can easily access the data ports (and corresponding indicating lamp) when the mini-computer is placed on the stand. Ex. 1003, ¶ 128. For example, in the product listed in Satechi, the data ports are located on the user-facing front side, opposite the back side that aligns with the back portion of the mini-computer. Ex. 1003, ¶ 128.

A POSITA would have been motivated to implement Satechi's data ports in Ye's base docking station when placing the Mac mini M4 on Ye's base docking station so that the users can easily access the data ports. Ex. 1003, ¶ 129. As discussed in Section III.F.3 below, a POSITA would have been motivated and able to modify Ye, Apple, and Koshiishi by using Satechi's data ports, and thus reach the combination of Ye, Apple, Koshiishi and Satechi that discloses all of the limitations of [2.1]. Ex. 1003, ¶¶ 129-131.

b. Claim 8

(1) [8.0]

Same as Ground 1, Elements [1.0]-[1.3].

(2) [8.1]

Apple discloses the Mac Mini M4, which is a mini-computer that has a square perimeter with rounded corners. Ex. 1006; Ex. 1003, ¶¶ 132-133.



Annotated Figure of Apple

A POSITA would be motivated to design the perimeter of Ye's base docking station for supporting Mac Mini M4 as substantially the same size as the perimeter of the Mac Mini M4. Ex. 1003, ¶ 134. By matching the perimeters, when placing the Mac Mini M4 on Ye's base docking station, Ye's base docking station seamlessly

enables access to the back bottom portion of the Mac Mini M4 through the notch 12c. Ex. 1003, ¶ 134.

Satechi discloses a mini-computer with a perimeter that is square with rounded corners, and a stand or hub that is “[d]esigned to feel like a natural extension of your Mac Mini with an elegant brushed finish and matching space gray aluminum alloy.” That is, the perimeters of the mini-computer and the mini-computer stand are substantially the same size. Ex. 1008, p. 3; Ex. 1003, ¶ 135.



Annotated Figure of Satechi



Annotated Figure of Satechi

As discussed in Section III.F.3 below, a POSITA would have been motivated and able to reach the combination of Ye, Apple, Koshiishi, and Satechi that discloses all of the limitations of [8.1].

3. A POSITA Would Have Had Reason to Combine Ye with Apple, Koshiishi, And Satechi

Satechi demonstrates the well-known industry practice of positioning data ports on a user-facing front side, opposite the back corner, to ensure easy access when the device is docked. Ex. 1003, ¶¶ 123, 124, 140. Satechi also teaches sizing the stand's perimeter to be substantially the same as the mini-computer to provide a seamless, aligned fit. Ex. 1003, ¶¶ 124, 140.

Because a POSITA possesses ordinary creativity, they would have recognized Ye's docking station as a device ready for improvement and would have been motivated to apply Satechi's front-facing data ports and precisely sized perimeter to it. Ex. 1003, ¶ 141. A POSITA would have had a reasonable expectation of success in making this modification, as arranging data ports and matching device perimeters are routine engineering tasks that do not alter the primary supporting function of the base dock. This combination represents a simple substitution of known elements that yields the predictable result of a more convenient, visually cohesive mini-computer hub where users can easily access the data ports. Ex. 1003, ¶¶ 136-138, 141.

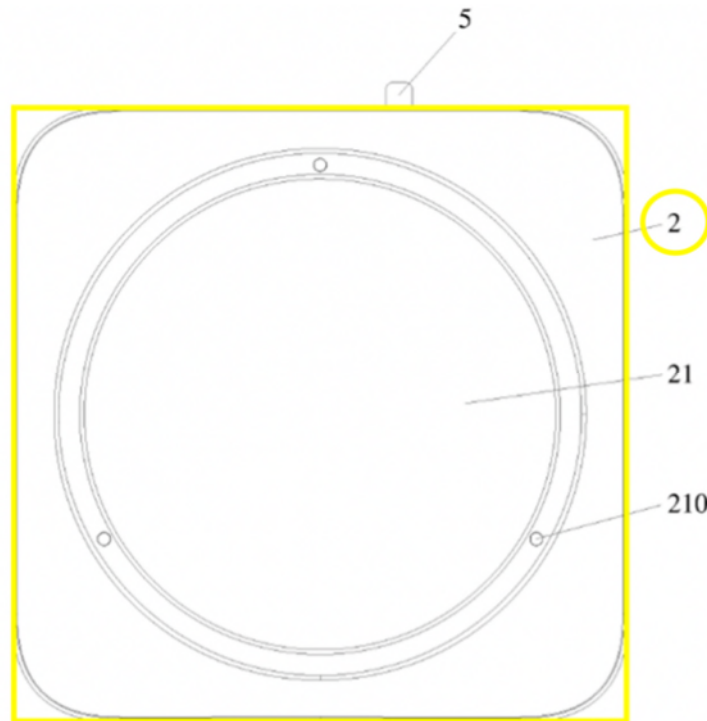
G. Ground 3: Claim 4 Is Rendered Obvious over Ye in View of Apple, Koshiishi, and Liao

1. Liao

Liao discloses an adapter compatible with Mac Mini, which has a square perimeter with rounded corners. Ex. 1010, FIG. 2; Ex. 1003, ¶ 143.

As shown in FIG. 2 of Liao (reproduced below), “the base 1 has a square structure with four first rounded corners 14. The upper end of the base 1 is an opening, and the upper cover 2 can cooperate with the base 1 to cover the opening. The upper cover 2 has the second rounded corners 22 that match the corresponding first rounded corners 14. The adapter with this structure is compatible with electronic devices, especially with the size of Mac Mini. The adapter supporting the Mac Mini is aesthetically pleasing. The adapter is designed with rounded corners to prevent

right angles from scratching the user and improve safety during use.” Ex. 1010, [0051], FIG. 2; Ex. 1003, ¶ 144.



Annotated FIG. 2 of Liao

Liao qualifies as prior art under 35 U.S.C. §§ 102(a)-(b) because it was published on June 11, 2020, which is more than one year before the '567 Patent's earliest claimed priority date of October 31, 2024. Ex. 1010 at [43]; Ex. 1001 at [63].

Liao is analogous art to the '567 Patent because it is from the same field of endeavor as the '567 Patent. Ex. 1003, ¶ 147. In particular, the '567 Patent is directed to “a stand for use with a mini-computer” and Liao is directed to “adapters suitable for this Mac Mini electronic product.” *See* Ex. 1001, 1:14-17, Claim 1; *see also* Ex. 1010, [0044]; Ex. 1003, ¶ 147. Thus, both Liao and the '567 Patent are in the same

field of endeavor, namely, support structures and adapters designed to interface with mini-computers. Ex. 1003, ¶ 147.

2. The Combination of Ye, Apple, Koshiishi, And Liao Discloses Every Element of Claim 4

a. Claim 4

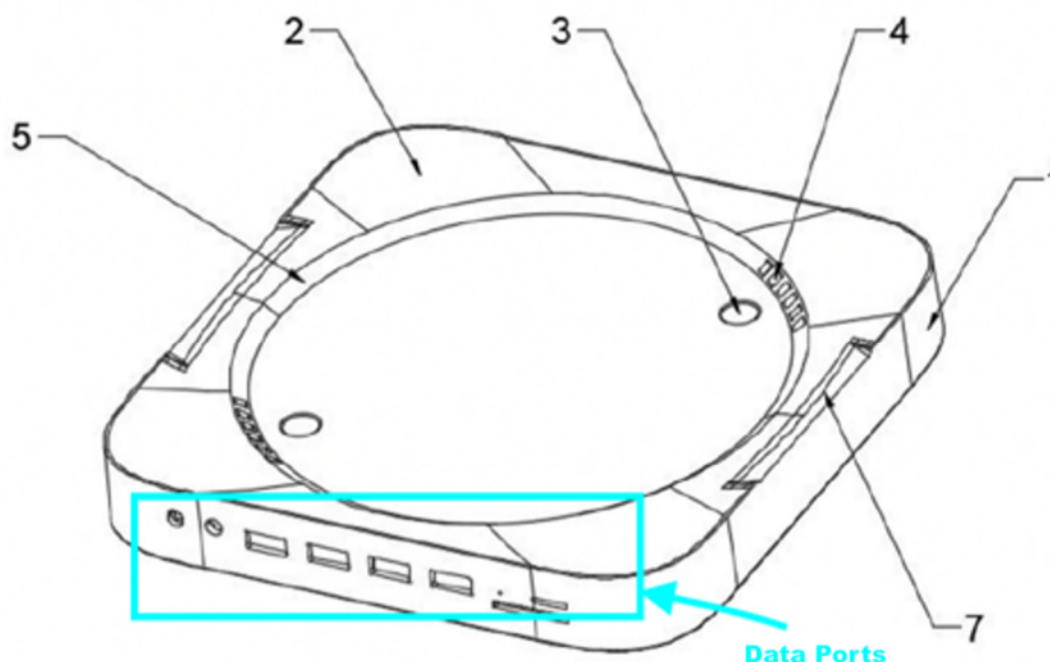
(1)[4.0]

Same as Ground 1, Elements [1.0]-[1.3].

(2)[4.1]

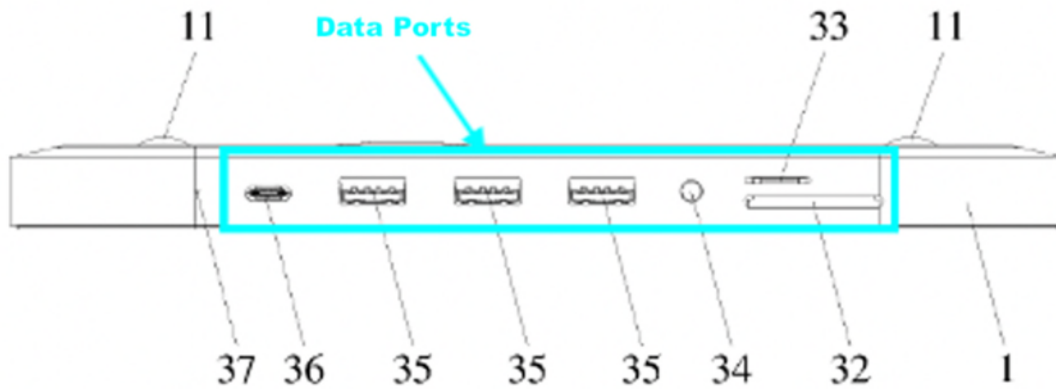
Ye and Liao disclose this Element. Ex. 1003, ¶¶ 148, 152.

Ye discloses a front side and an opposite back side that includes a back corner, and a data port on the front side because Ye discloses that the base docking station includes data ports on the front side of the base docking station. Ex. 1005, FIG. 1; Ex. 1003, ¶ 149.

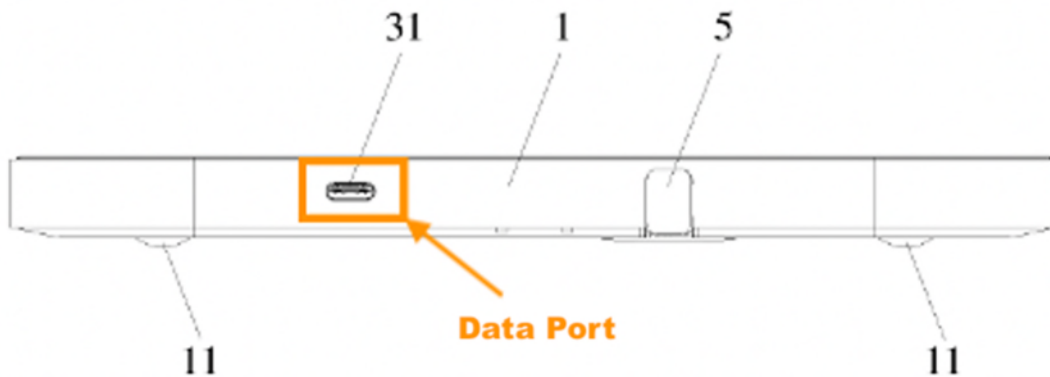


Annotated FIG. 1 of Ye

Liao discloses a front side and an opposite back side that includes the back corner; and a data port on the front side and another data port on the back side of the mini-computer stand to form a hub because Liao discloses a Mac Mini adapter for supporting a Mac Mini computer. Ex. 1010, [0044]; Ex. 1003, ¶ 150. As shown in FIGS. 3 and 4 (reproduced below), Liao discloses that the hub (corresponding to the mini-computer stand in [4.1]) includes data ports on both the front side and the back side that are opposite to each other and the back side has a back corner. Ex. 1010, FIGS. 3, 4; Ex. 1003, ¶ 150.



Annotated FIG. 4 of Liao



Annotated FIG. 3 of Liao

A POSITA would have been motivated to implement Liao's data ports in Ye's base docking station when placing the Mac mini M4 on Ye's base docking station to provide additional available surface area, enabling more flexible and spacious data port placement. Ex. 1003, ¶ 151. Further, a POSITA would have been motivated to implement Liao's data port at the back of the Ye's base docking station so that the stand could be directly connected to the relevant interfaces located on Mac mini's rear side, reducing cable clutter and improving overall ease of use. Ex. 1003, ¶ 151.

As discussed in Section III.G.3 below, a POSITA would have been motivated and able to modify Ye, Apple, and Koshiishi by using Liao's data ports, and thus reach the combination of Ye, Apple, Koshiishi and Liao that discloses all of the limitations of [4.1].

3. A POSITA would have had reason to combine Ye with Apple, Koshiishi, and Liao

For Claim 4, which requires data ports on both the front and back sides of the stand, a POSITA modifying Ye's base docking station to accommodate the Mac mini M4 would have been motivated to incorporate the distributed port teachings of Liao. Ex. 1003, ¶ 154.

As established above, adapting Ye for the Mac mini M4 requires structurally modifying a rear corner to provide power button access. Recognizing that this physical cutout reduces the available internal volume and structural continuity of the stand, a POSITA would naturally seek to optimize the placement of Ye's internal components and external data ports. Ex. 1003, ¶¶ 151, 155. Liao demonstrates the well-known industry solution for Mac mini hubs: distributing data ports across multiple faces, specifically positioning them on both the front side and the opposite back side. Ex. 1003, ¶146.

A POSITA would have been motivated to apply Liao's distributed configuration to Ye's base docking station to maximize available surface area, alleviate wire clutter on the user-facing side, and provide direct connection between

the stand and device. Ex. 1003, ¶ 155. A POSITA would have had a reasonable expectation of success in making this modification, as relocating or adding standard data ports to an opposing face of a housing is a routine engineering task that does not alter the primary supporting function of the dock. Ex. 1003, ¶¶ 151, 156. Modifying the primary combination to include ports on both the front and rear faces represents a routine design choice that yields the predictable result of facilitating convenient connection, maximizing the available surface area, and enabling more flexible, spacious data port placement without cluttering a single side of the device. Ex. 1003, ¶¶ 151, 156.

H. Ground 4: Claims 1-8 Are Rendered Obvious Over Liao in View of Apple and Koshiishi

Claims 1-8 are unpatentable because they are obvious in view of the combination of Liao, Apple, and Koshiishi. In particular, each and every element of Claims 1-8 is disclosed by Liao, Apple, and Koshiishi, and a POSITA would have had reason to combine them.

1. The Combination of Liao, Apple, and Koshiishi Discloses Every Element of Claims 1-8

a. Claim 1

(1)[1.0]

The preamble of claim 1 is not limiting because it merely states the purpose or intended use of the alleged invention. It does not define any of the claim

limitations, which are set forth fully in the body of the claim (i.e., a mini-computer stand for use with a mini-computer that has a square perimeter with rounded corners).

To the extent the preamble is limiting, Liao discloses “adapters suitable for this Mac Mini electronic products” and that “[t]he adapter with this structure is compatible with electronic devices, especially with the size of Mac Mini.” Ex. 1010, [0044], [0051]; Ex. 1003, ¶ 158. All MAC Mini models have a square perimeter with rounded corners. Ex. 1003, ¶ 158.

In the same field of endeavor, Apple discloses Mac Mini M4 which is a mini-computer that has a square perimeter with rounded corners. Ex. 1006, figure in p. 2; Ex. 1003, ¶ 159.



Annotated Figure of Apple

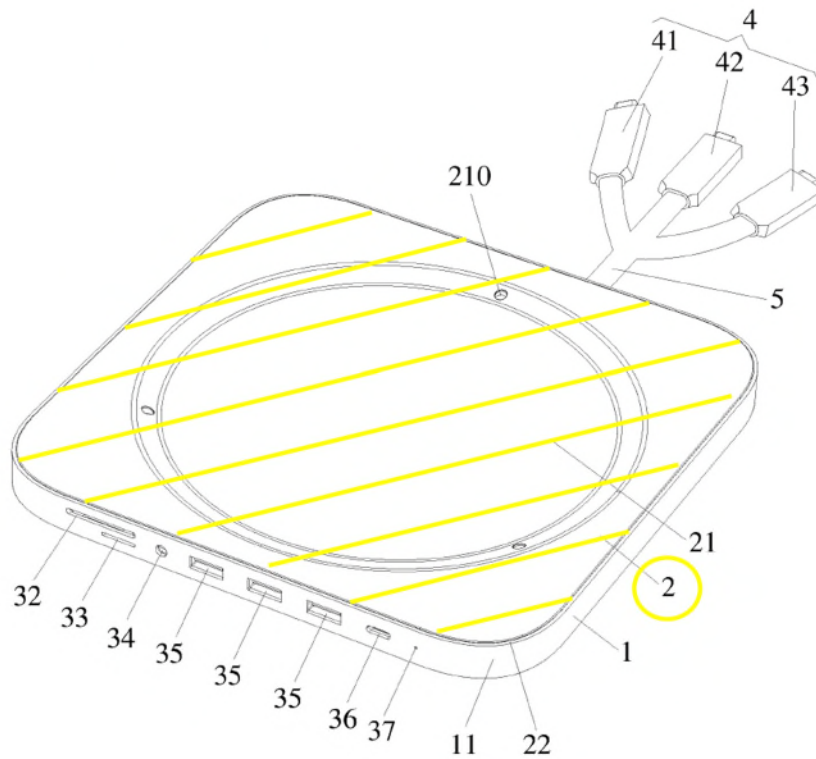
In the same field of endeavor, Koshiishi discloses a charging stand charging a battery of electronic device. Ex. 1007, 1:12-13; Ex. 1003, ¶ 160.

(2)[1.1]

Liao discloses this Element. Ex. 1003, ¶¶ 161, 165.

Specifically, Liao discloses that “the upper cover 2 (corresponding to the top in [1.1]) is provided with a groove 21 that protrudes towards the bottom surface of the base 1 for supporting an electronic device.” Ex. 1010, FIG. 1, [0043]; Ex. 1003, ¶ 162.

As shown in FIG. 1 (reproduced below), one embodiment of Liao, “by providing a groove 21 on the upper cover 2, can effectively support electronic devices, especially for the Mac Mini. The bottom of the Mac Mini has a circular protrusion, and the groove 21 is designed in a bowl shape, which can form a good fit with the circular protrusion and stably support the Mac Mini.” Ex. 1010, FIG. 1, [0044]; Ex. 1003, ¶¶ 163-164.



Annotated FIG. 1 of Liao

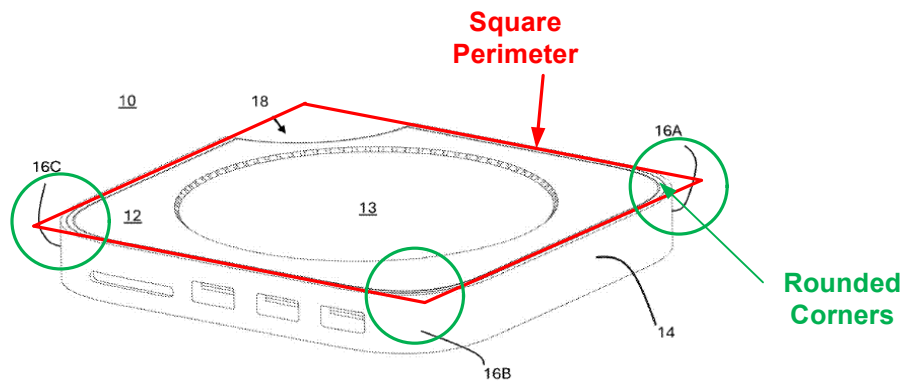
(3) [1.2]

Liao discloses this Element. Ex. 1003, ¶¶ 166, 169.

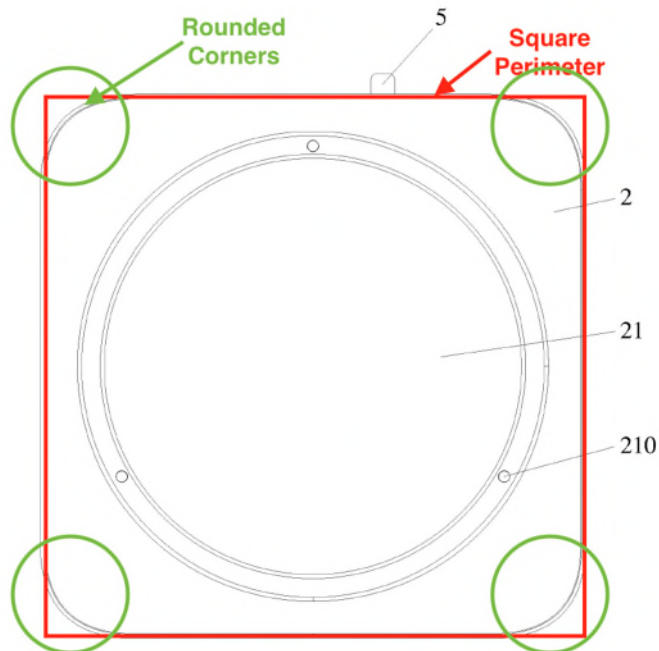
Liao discloses that “the base 1 has a square structure with four first rounded corners 14. The upper end of the base 1 is an opening, and the upper cover 2 can cooperate with the base 1 to cover the opening. The upper cover 2 has the second rounded corners 22 that match the corresponding first rounded corners 14. The adapter with this structure is compatible with electronic devices, especially with the size of Mac Mini. The adapter supporting the Mac Mini is aesthetically pleasing.

The adapter is designed with rounded corners to prevent right angles from scratching the user and improve safety during use.” Ex. 1010, [0051]; Ex. 1003, ¶ 167.

Specifically, as shown in FIG. 2 (reproduced below), Liao’s adapter has a square perimeter (annotated in red) with a plurality of rounded corners (annotated in green). Ex. 1003, ¶ 168.



Annotated FIG. 3A of the '567 Patent



Annotated FIG. 2 of Liao

(4)[1.3]

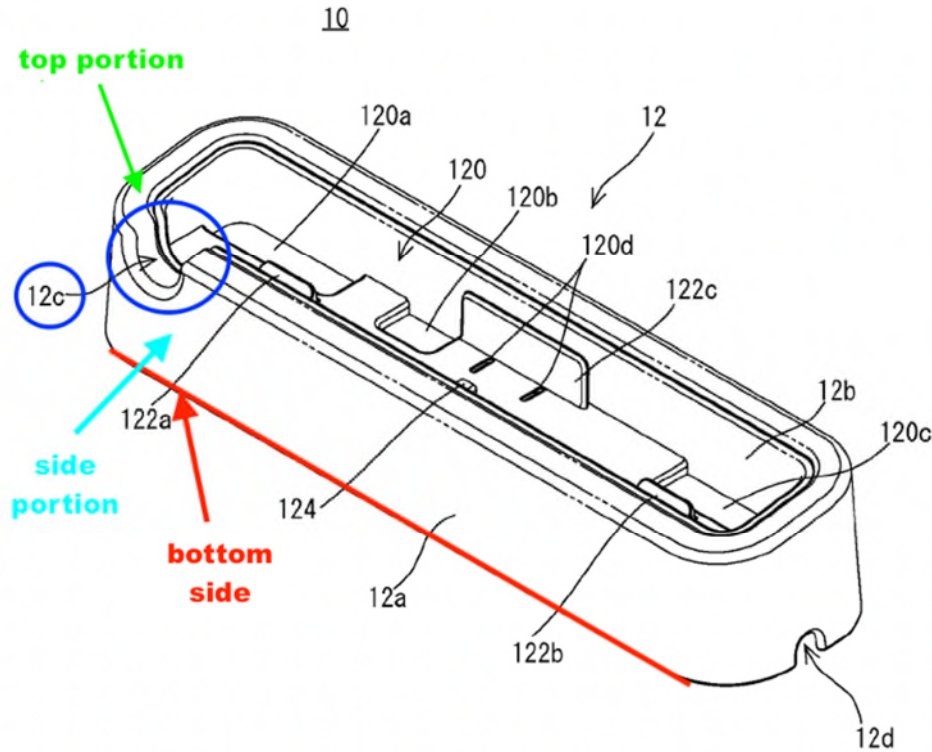
The combination of Liao, Apple, and Koshiishi discloses this Element. Ex. 1003, ¶ 170.

First, Liao discloses “adapters suitable for this Mac Mini electronic products” and that “[t]he adapter with this structure is compatible with electronic devices, especially with the size of Mac Mini.” Ex. 1010, [0044], [0051]; Ex. 1003, ¶ 171.

As a threshold matter, a POSITA would readily understand the physical orientation of these devices. Because the Mac mini has a designated rear or back side, placing the Mac mini on top of Liao’s adapter base 1 dictates that Liao’s square adapter will correspondingly have a front side and a back side. Consequently, when aligned during use, there will necessarily be two back corners on Liao’s adapter from its plurality of rounded corners that correspond directly to the two back corners of the Mac mini. Ex. 1003, ¶ 171.

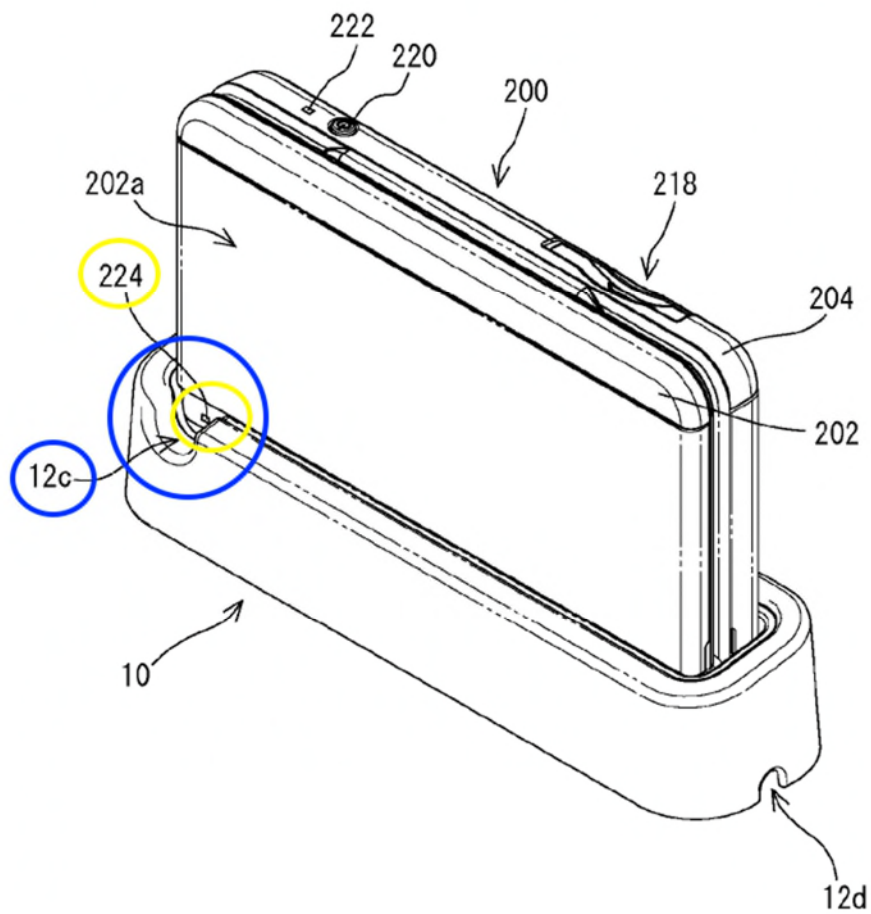
Furthermore, Koshiishi discloses a known structure: a notch 12c formed in the upper left of the main body of the charging stand, spanning top and side portions of the stand without extending through a bottom side of the stand, which is adapted to expose an underlying feature of the mini-computer through the notch 12c when the mini-computer is placed on the top of the stand. Ex. 1003, ¶ 173. “As seen from FIG. 1, FIG. 2(A) and FIG. 3(A), a notch 12c of a semi-circle shape is formed in

upper left of the main body 12 (the outer side member 12a and the inner side member 12b) in the front of the charging stand 10.” Ex. 1007, 5:57-60; Ex. 1003, ¶ 173.



Annotated FIG. 1 of Koshiishi

Koshiishi further explains that this structure exposes features of the mounted device: “[f]urthermore, the communication lamp 224 provided on the hinge 206 is arranged at a position that the notch 12c is provided. Therefore, even if the portable game apparatus 200 is being charged, it is possible to see the lighting, putting out light, blinking and the color of lighting (luminescence) of the communication lamp 224.” Ex. 1007, 11:23-28, FIG. 6(A); Ex. 1003, ¶ 174.



Annotated FIG. 6(A) of Koshiishi

In addition, Apple discloses that the power button is located on the rear left of the Mac Mini M4. Ex. 1006, figure in p. 2; Ex. 1003, ¶¶ 171-172.



Annotated Figure of Apple

Guided by Liao’s disclosure that “[t]he adapter with this structure is compatible with electronic devices, especially with the size of the Mac Mini” (Ex. 1010, [0051]), a POSITA would naturally seek to use Liao’s adapter with the Mac mini M4 disclosed in Apple. Ex. 1003, ¶¶ 172, 175. Because placing the Mac mini M4 on Liao’s adapter obstructs the bottom rear-left power button, a POSITA would be motivated to resolve this known accessibility issue by redesigning the docking station with a dedicated power-button access feature, that is, a cutaway to expose the back bottom portion of the mini-computer corresponding to the power button on the rear left of the Mac Mini M4, such that a user can access the power button when the mini-computer is placed on the top of the mini-computer stand. Ex. 1003, ¶¶ 172, 175-179.

Thus, Liao in view of Apple and Koshiishi discloses each and every limitation of [1.3]. Ex. 1003, ¶ 179. A POSITA would have been motivated to implement Koshiishi's notch 12c in Liao's adapter when placing the Mac mini M4 on Liao's adapter. Ex. 1003, ¶¶ 172, 175-179. As discussed in Section III.H.2 below, a POSITA would have been motivated and able to modify Liao and Apple by using Koshiishi's notch 12c, and thus reach the combination of Liao, Apple, and Koshiishi that discloses all of the limitations of [1.3].

b. Claim 2

(1)[2.0]

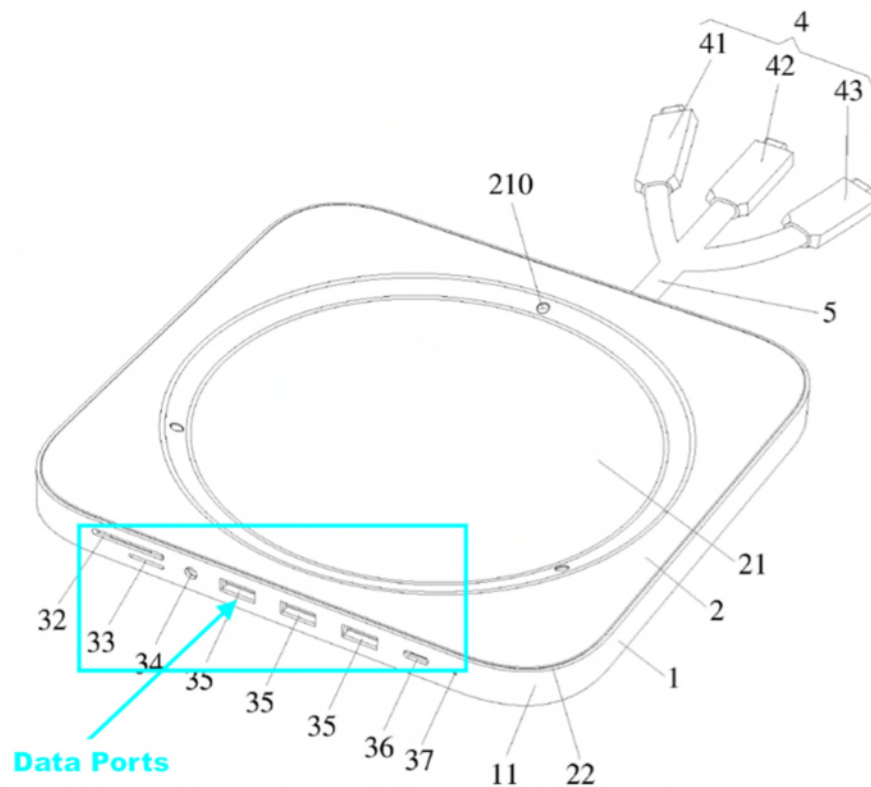
Same as Ground 4, Elements [1.0]-[1.3].

(2)[2.1]

Liao discloses this Element. Ex. 1003, ¶¶ 181, 184.

Specifically, Liao discloses that “the adapter ports further comprise a fifth port 35 electrically connected to the control board. The base 1 is correspondingly provided with a fifth terminal hole (not shown in the figure) for supporting the fifth port 35. Specifically, the fifth terminal hole and the second terminal hole are located on the same side of the base 1, and the fifth port 35 is directly provided on the control board. Preferably, the fifth port 35 is a USB 3.0 interface, which is not uniquely limited here.” Ex. 1010, [0056], FIG. 1; Ex. 1003, ¶ 182.

As illustrated in FIG. 1 (reproduced below), because a Mac mini has a designated rear or back side, when placing the Mac mini on top of Liao's adapter, the adapter will correspondingly have a front side and a back side. For example, when the front side, having ports 32-37, of Liao's adapter aligns with the front side of the Mac mini, the ports 32-37 (corresponding to data ports in [2.1]) are positioned on the front side of the base 1 to form a hub, the front side is opposite a back side of the adapter that includes a back corner. Ex. 1003, ¶ 183.



Annotated FIG. 1 of Liao

c. Claim 3

(1)[3.0]

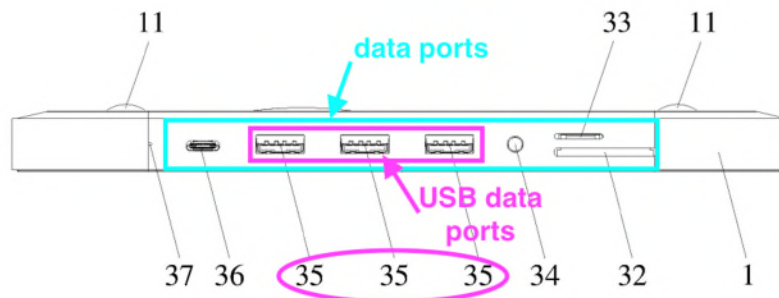
Same as Ground 4, Elements [1.0]-[1.3].

(2)[3.1]

Liao discloses this Element. Ex. 1003, ¶¶ 186, 188.

Liao discloses that the various data ports include USB data ports positioned on the front side of the base 1. Ex. 1003, ¶ 187.

Specifically, Liao describes that “the adapter ports further comprise a fifth port 35 electrically connected to the control board. The base 1 is correspondingly provided with a fifth terminal hole (not shown in the figure) for supporting the fifth port 35. Specifically, the fifth terminal hole and the second terminal hole are located on the same side of the base 1, and the fifth port 35 is directly provided on the control board. Preferably, the fifth port 35 is a USB 3.0 interface, which is not uniquely limited here.” Ex. 1010, [0056], FIG. 4; Ex. 1003, ¶ 187.



Annotated FIG. 4 of Liao

d. Claim 4

(1)[4.0]

Same as Ground 4, Elements [1.0]-[1.3].

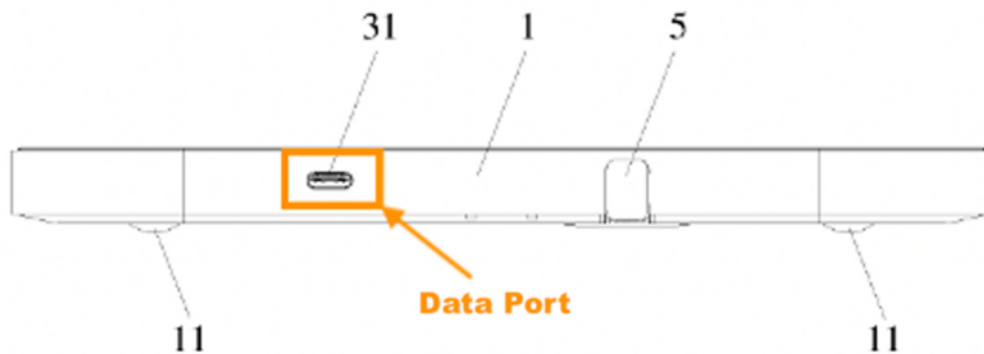
(2)[4.1]

Liao discloses this Element. Ex. 1003, ¶¶ 190, 193.

Liao discloses a front side and an opposite back side that includes the back corner; and a data port on the front side and another data port on the back side of the mini-computer stand to form a hub. Ex. 1003, ¶ 191. As discussed above in Ground 4, Element [2.1], when the front side, having ports 32-37, of Liao's adapter aligns with the front side of the Mac mini, the ports 32-37 are located on the first side and the port 31 is located on the back side. Ex. 1003, ¶ 192. As shown in FIGS. 3 and 4 (reproduced below), Liao discloses that the hub (corresponding to the mini-computer stand in [4.1]) includes data ports on both the front side and the back side that are opposite to each other and the back side has a back corner. Ex. 1010, FIGS. 3, 4; Ex. 1003, ¶ 192.



Annotated FIG. 4 of Liao



Annotated FIG. 3 of Liao

e. Claim 5

(1)[5.0]

Same as Ground 4, Elements [1.0]-[1.3].

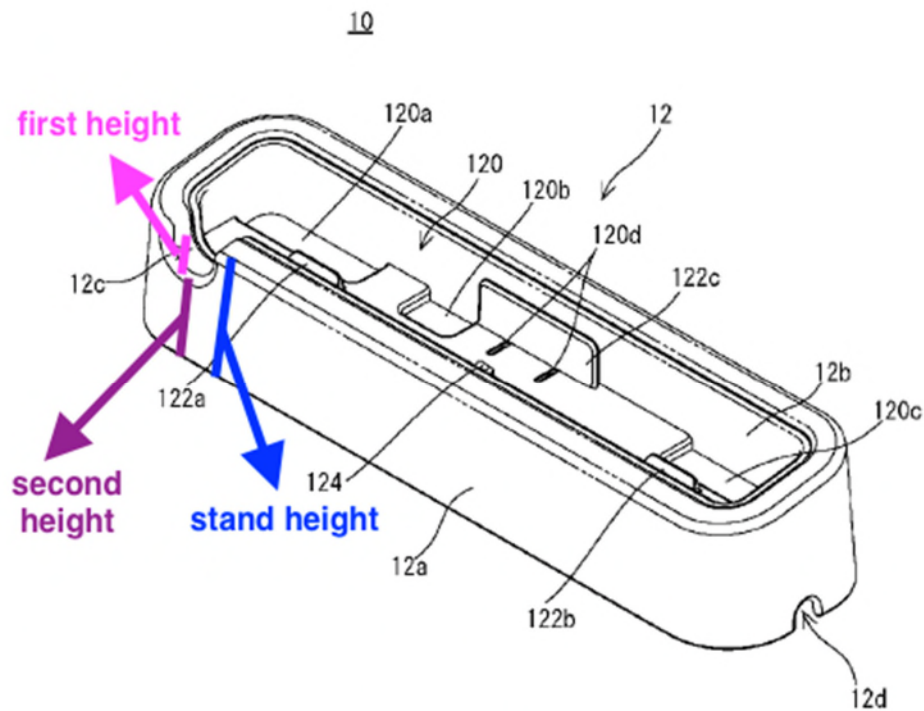
(2)[5.1]

Koshiishi discloses this Element. Ex. 1003, ¶¶ 195, 198.

Koshiishi discloses that the charging stand has a) a first height that defines a beginning of the cutaway in the side portions and b) a second height that defines an end of the cutaway in the side portions; the charging stand has a stand height that is

a sum of the first height and the second height; and the second height is greater than the first height. Ex. 1007, FIG. 1; Ex. 1003, ¶ 196.

As illustrated in FIG. 1 (reproduced below) of Koshiishi, the charging stand has a first height (annotated in pink) that defines a beginning of the cutaway in the side portions and a second height (annotated in purple) that defines an end of the cutaway in the side portions. Ex. 1003, ¶ 197. The stand height (annotated in blue) of the charging stand is a sum of the first height and the second height and the second height is greater than the first height. Ex. 1003, ¶ 197.



Annotated FIG. 1 of Koshiishi

f. Claim 6

As detailed in Ground 9 below, Petitioner maintains that the term “horizontally curved surface” in Claim 6 is indefinite under 35 U.S.C. § 112 because it fails to inform a POSITA of the claim scope with reasonable certainty. However, to the extent the Board finds the term amenable to construction, or adopts any construction proposed by the Patent Owner to save the claim from indefiniteness, Koshiishi discloses this feature under any such reasonable interpretation. Ex. 1003, ¶ 200.

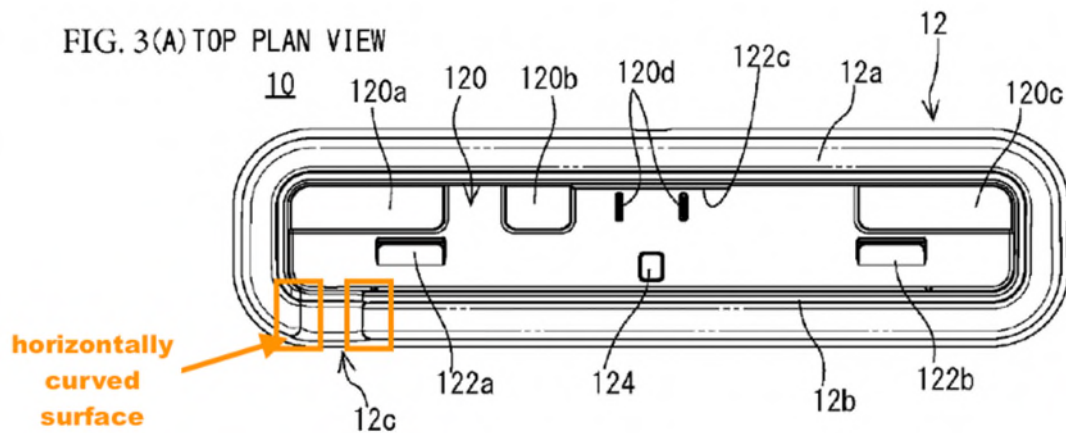
(1) [6.0]

Same as Ground 4, Elements [1.0]-[1.3].

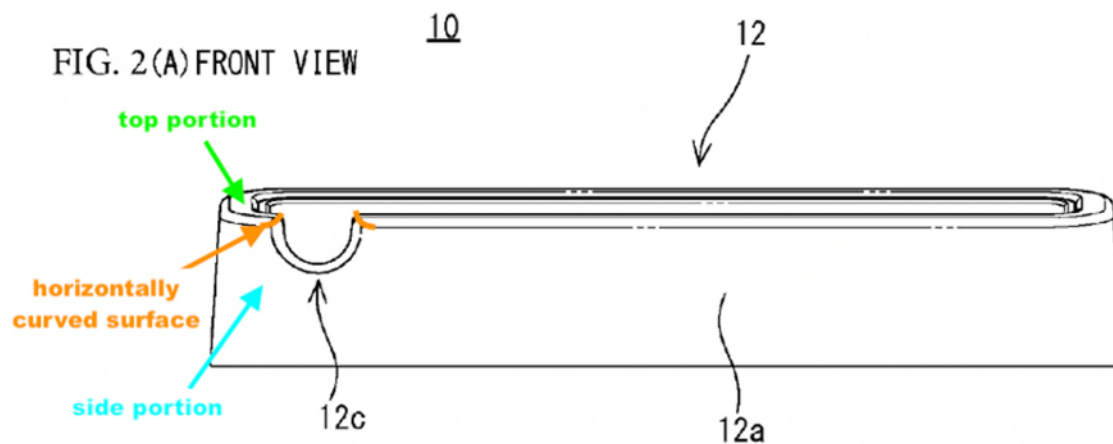
(2) [6.1]

Koshiishi discloses this Element. Ex. 1003, ¶¶ 201, 203.

As shown in FIGS. 2(A) and 3(A) (reproduced below), Koshiishi discloses that the charging stand has a horizontally curved surface that defines the notch 12c in the top and the side portions. Ex. 1007, FIGS. 2(A), 3(A); Ex. 1003, ¶ 202.



Annotated FIG. 3(A) of Koshiishi



Annotated FIG. 2(A) of Koshiishi

g. Claim 7

(1) [7.0]

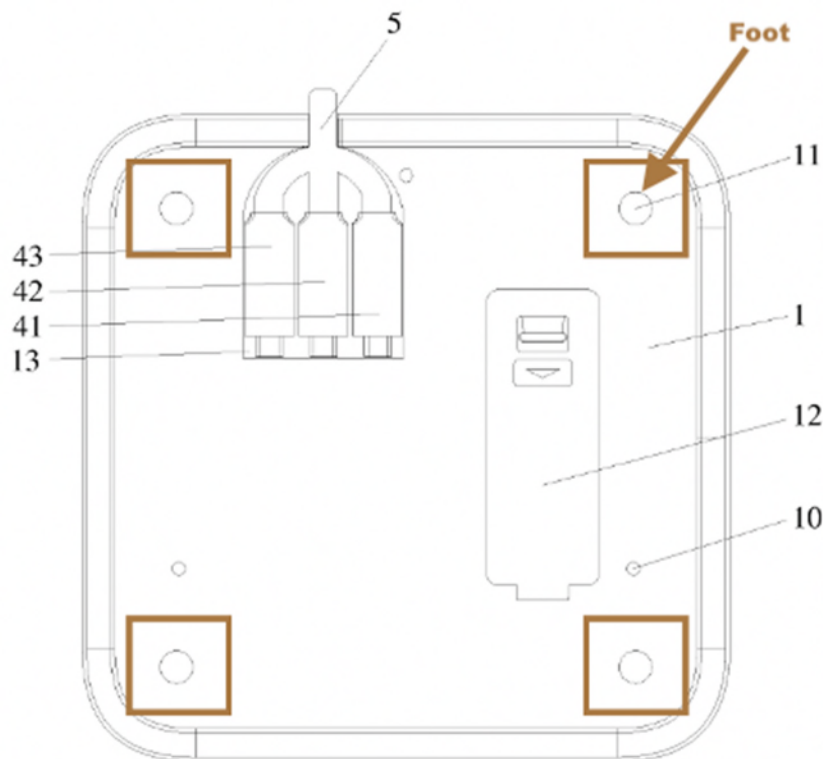
Same as Ground 4, Elements [1.0]-[1.3].

(2) [7.1]

Liao discloses this Element. Ex. 1003, ¶¶ 205, 208.

Specifically, Liao discloses that “several anti-slip rubber pads 11 are uniformly spaced on the side of the base 1 facing away from the upper cover 2. This structure, on the one hand, has several anti-slip rubber pads 11 that provide anti-slip function; on the other hand, the base 1 can be spaced apart from the plane to prevent liquid on the plane from flowing into the adapter or electronic device, thereby improving the safety and reliability of the adapter or electronic device.” Ex. 1010, [0049]; Ex. 1003, ¶ 206.

As shown in FIG. 5 (reproduced below), Liao discloses a plurality of feet (annotated in brown) coupled to the bottom side of the base docking station that is opposite the top. Ex. 1010, FIG. 5; Ex. 1003, ¶ 207.



Annotated FIG. 5 of Liao

h. Claim 8

(1) [8.0]

Same as Ground 4, Elements [1.0]-[1.3].

(2) [8.1]

Liao discloses this Element. Ex. 1003, ¶¶ 210, 217.

Apple discloses the Mac Mini M4, which is a mini-computer that has a square perimeter with rounded corners. Ex. 1006, figure in p. 2; Ex. 1003, ¶ 211.



Annotated Figure of Apple

Liao discloses that “the base 1 has a square structure with four first rounded corners 14. The upper end of the base 1 is an opening, and the upper cover 2 can

cooperate with the base 1 to cover the opening. The upper cover 2 has the second rounded corners 22 that match the corresponding first rounded corners 14. The adapter with this structure is compatible with electronic devices, especially with the size of Mac Mini. The adapter supporting the Mac Mini is aesthetically pleasing. The adapter is designed with rounded corners to prevent right angles from scratching the user and improve safety during use.” Ex. 1010, [0051]; Ex. 1003, ¶ 212.

A POSITA would be motivated to design the perimeter of Liao’s adapter for supporting Mac Mini M4 substantially the same size as the perimeter of the Mac Mini M4. Ex. 1003, ¶ 213. By matching the perimeters, when placing the Mac Mini M4 on Liao’s adapter, Liao’s adapter seamlessly enables access to the back bottom portion of the Mac Mini M4 through the notch 12c of Koshiishi. Ex. 1003, ¶¶ 214-216.

2. A POSITA Would Have Had Reason to Combine Liao with Apple, and Koshiishi

A POSITA would have had reason to combine Liao with Apple and Koshiishi based on design incentives, market forces, and the predictable application of known structural techniques to solve a recognized problem. Ex. 1003, ¶ 219.

As established above, Liao, Apple, and Koshiishi are analogous art because they are from the same field of endeavor – namely, support structures and accessories for mini-computers and electronic devices – and are reasonably pertinent

to the problem of accommodating structural device features within a stand. Ex. 1003, ¶ 220.

Liao teaches adapters suitable for the Mac Mini electronic products. Ex. 1010. Apple discloses the Mac Mini M4, released on October 29, 2024, which features a power button uniquely located on its bottom rear left corner. Ex. 1006; Ex. 1003, ¶ 221. A POSITA placing the Mac mini M4 of Apple onto Liao’s adapter would immediately recognize a functional conflict: the docking station would block access to the power button. Ex. 1003, ¶ 221.

This accessibility problem, and its structural solution, were instantly recognized by the public and POSITAs. On October 29 and 30, 2024, public forums noted that users “can’t put a dock below the mini because of the power button” and concluded that “[i]t would be trivial to put a recess in that corner to accommodate a finger.” Ex. 1011, pp. 2, 7; Ex. 1003, ¶ 222. This constitutes contemporaneous evidence that market-driven design needs prompted an obvious, predictable variation. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007) (The Supreme Court held that “design incentives and other market forces can prompt variations of [known devices],” and that “if a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability.”)

To implement this “trivial” recess, a POSITA would look to known support structures in the same field of endeavor. Koshiishi teaches providing a notch or

cutaway in the periphery of a charging stand to expose underlying device features (specifically, a light-emitting portion), Ex. 1007, 11:23-28, FIG. 6(A); Ex. 1003, ¶ 223. Because a POSITA is a person of ordinary creativity, not an automaton, they would readily recognize that Koshiishi's peripheral cutaway technique is readily transferable to any stand that needs to preserve physical or visual access to an underlying device feature. Ex. 1003, ¶ 223. Furthermore, this modification represents the application of a known technique (Koshiishi's method of providing a cutaway in the top and side portions that does not extend through the bottom) to a known device ready for improvement (Liao's adapter). Ex. 1003, ¶ 223.

Even considering the minor differences in style between Koshiishi, an insertion-style stand holding a device vertically, and Liao, a flat stacking-style adapter, such minor distinctions would not deter a POSITA. Ex. 1003, ¶¶ 224-227. The test for obviousness is not whether the structures of two references can be bodily incorporated into one another, but whether a POSITA would be motivated to apply the teachings of the secondary reference to the primary one. *See In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012) ("It is well-established that a determination of obviousness based on teachings from multiple references does not require an actual, physical substitution of elements"); *see also Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1380–81 (Fed. Cir. 2023) (reversing the Board for erroneously

requiring a physical combination of components and reaffirming that an obviousness analysis “does not require an actual, physical substitution of elements”).

Here, Koshiishi teaches the structural principle of forming a partial-depth notch (12c) on an upper peripheral edge to expose an obstructed functional feature, without that notch extending through the bottom side of the stand (as clearly shown in Koshiishi Fig. 2(A)). Ex. 1003, ¶ 224. A POSITA would readily recognize that this localized notching technique is orientation-agnostic and would seamlessly apply it to the upper back corner of Liao’s flat adapter to accommodate the Mac mini M4’s power button, yielding the claimed structure. Ex. 1003, ¶ 224.

Under *KSR*, “[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp.” 550 U.S. 398, 421. Because the location of the M4 power button was fixed by Apple, placing a corner cutaway corresponding to that exact location using Koshiishi’s teachings represents routine engineering design among a finite number of predictable solutions. Ex. 1003, ¶¶ 176-178, 225. A POSITA would have had a reasonable expectation of success in modifying Liao with Koshiishi’s notch, as doing so requires only standard manufacturing techniques and does not alter the primary supporting function of Liao’s adapter. Ex. 1003, ¶¶ 176-178, 226. Ultimately,

this predictable variation yields the expected result of maintaining device support while enabling finger access to the power button. Ex. 1003, ¶¶ 179, 227.

I. Ground 5: Claims 2 and 8 are Rendered Obvious over Liao in View of Apple, Koshiishi, and Satechi

Claims 2 and 8 are unpatentable because they are obvious in view of the combination of Liao, Apple, Koshiishi, and Satechi. In particular, each and every element of Claims 2 and 8 is disclosed by Liao, Apple, Koshiishi, and Satechi, and a POSITA would have had reason to combine them.

1. The Combination of Liao, Apple, Koshiishi, And Satechi Discloses Every Element of Claims 2 And 8

a. Claim 2

(1)[2.0]

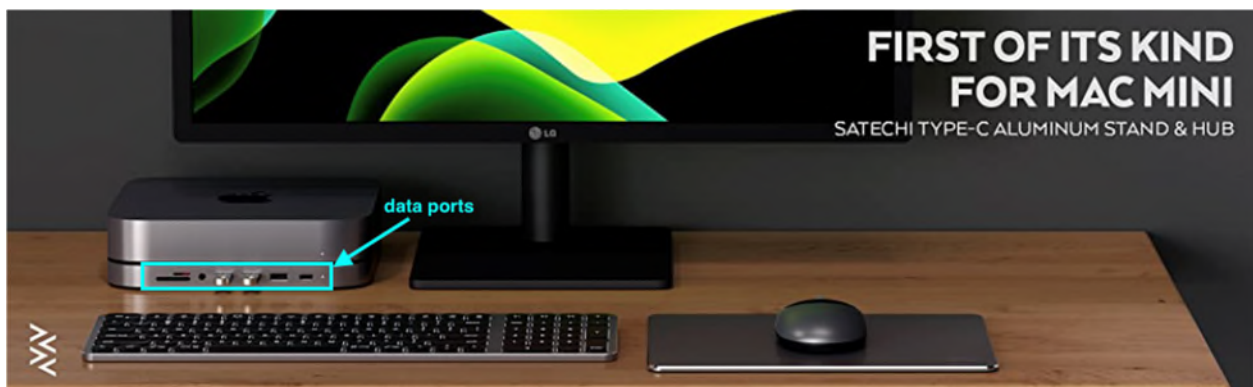
Same as Ground 4, Elements [1.0]-[1.3].

(2)[2.1]

Liao discloses the front side is opposite a back side of the mini-computer stand that includes the back corner as required in [2.1]. Independent from Liao's disclosure, Petitioner respectfully submits that Satechi discloses this Element. Ex. 1003, ¶¶ 228, 231.

Specifically, Satechi discloses a stand or hub compatible with Mac Mini having data ports positioned on the front side of the mini-computer stand. Ex. 1008, p. 1; Ex. 1003, ¶ 229. Specifically, Satechi discloses that the stand “[f]eatures an

USB-C data port, three USB 3.0 ports, micro/SD card readers, and a 3.5 mm headphone jack port for convenient access to your essential peripherals.” Ex. 1008, p. 3; Ex. 1003, ¶ 229. As shown below, the data ports are located on the user-facing front side opposite a back side of the stand, which includes a back corner corresponding to a back bottom portion of the mini-computer, so that the users can easily access the data ports when the mini-computer is placed onto the stand. Ex. 1008, figure in p. 2; Ex. 1003, ¶ 229.



Annotated Figure of Satechi

A POSITA would understand that this front side is opposite a back side of the stand, and that the back side includes a back corner corresponding to a back bottom portion of the mini-computer, so that the users can easily access the data ports (and corresponding indicating lamp) when the mini-computer is placed on the stand. Ex. 1003, ¶ 229. For example, in the product listed in Satechi, the data ports are located on the user-facing front side, opposite the back side that aligns with the back portion of the mini-computer. Ex. 1003, ¶ 229.

A POSITA would have been motivated to implement Satechi’s data ports in

Liao's adapter when placing the Mac mini M4 on Liao's adapter so that the users can easily access the data ports. Ex. 1003, ¶¶ 230-231. As discussed in Section III.I.2 below, a POSITA would have been motivated and able to modify Liao, Apple, and Koshiishi by using Satechi's data ports, and thus reach the combination of Liao, Apple, Koshiishi, and Satechi that discloses all of the limitations of [2.1].

b. Claim 8

(1) [8.0]

Same as Ground 4, Elements [1.0]-[1.3].

(2) [8.1]

Satechi discloses this Element. Ex. 1003, ¶¶ 233, 239.

Apple discloses the Mac Mini M4, which is a mini-computer that has a square perimeter with rounded corners. Ex. 1006, figure in p. 2; Ex. 1003, ¶ 234.



Annotated Figure of Apple

Liao does disclose the perimeters of the mini-computer and the mini-computer stand are substantially the same size as required in [8.1]. Independent from Liao's disclosure, Petitioner respectfully submits that Satechi discloses this Element. Liao discloses that "the base 1 has a square structure with four first rounded corners 14. The upper end of the base 1 is an opening, and the upper cover 2 can cooperate with the base 1 to cover the opening. The upper cover 2 has the second rounded corners 22 that match the corresponding first rounded corners 14. The adapter with this structure is compatible with electronic devices, especially with the size of Mac Mini. The adapter supporting the Mac Mini is aesthetically pleasing. The adapter is designed with rounded corners to prevent right angles from scratching the user and improve safety during use." Ex. 1010, [0051]; Ex. 1003, ¶ 235.

A POSITA would be motivated to design the perimeter of Liao's adapter for supporting Mac Mini M4 substantially the same size as the perimeter of the Mac Mini M4. Ex. 1003, ¶ 236. By matching the perimeters, when placing the Mac Mini M4 on Liao's adapter, Liao's adapter seamlessly enables access to the back bottom portion of the Mac Mini M4 through the notch 12c of Koshiishi. Ex. 1003, ¶ 236.

Satechi discloses a mini-computer with a perimeter that is square with rounded corners, and a stand or hub that is “[d]esigned to feel like a natural extension of your Mac Mini with an elegant brushed finish and matching space gray aluminum alloy.” Ex. 1008, p. 3; Ex. 1003, ¶ 237. That is, the perimeters of the mini-computer and the mini-computer stand are substantially the same size. Ex. 1003, ¶ 237.



Annotated Figure of Satechi



Annotated Figure of Satechi

As discussed in Section III.I.2 below, a POSITA would have been motivated and able to reach the combination of Liao, Apple, Koshiishi, and Satechi that discloses all of the limitations of [8.1].

2. A POSITA Would Have Had Reason to Combine Liao with Apple, Koshiishi, and Satechi

While the combination of Liao, Apple, and Koshiishi renders independent Claim 1 obvious by addressing the physical accessibility of the Mac mini M4's power button, dependent claims 2 and 8 introduce routine utility and design enhancements—specifically, strategic data port placement and precise footprint sizing. Ex. 1003, ¶ 241. To the extent the primary combination does not explicitly

detail these limitations, a POSITA would have been motivated to incorporate the teachings of Satechi. Ex. 1003, ¶ 241.

Satechi demonstrates the well-known industry practice of positioning data ports on a user-facing front side, opposite the back corner, to ensure easy access when the device is docked. Ex. 1008, p. 3; Ex. 1003, ¶ 242. Satechi also teaches sizing the stand's perimeter to be substantially the same as the mini-computer to provide a seamless, aligned fit. Ex. 1008, p. 3; Ex. 1003, ¶ 242.

Because a POSITA possesses ordinary creativity, they would have recognized Liao's stand as a device ready for improvement and would have been motivated to apply Satechi's front-facing data ports and precisely sized perimeter to it. Ex. 1003, ¶¶ 238, 243. A POSITA would have had a reasonable expectation of success in making this modification, as arranging data ports and matching device perimeters are routine engineering tasks that do not alter the primary supporting function of the base dock. Ex. 1003, ¶ 243. This combination represents a simple substitution of known elements that yields the predictable result of a more convenient, visually cohesive mini-computer hub where users can easily access the data ports. Ex. 1003, ¶ 243.

J. Ground 6: Claims 1-3, 5, and 8 are Rendered Obvious over Satechi in view of Apple and Shen

Claims 1-3, 5, and 8 are unpatentable because they are obvious in view of the combination of Satechi, Apple, and Shen. In particular, each and every element of

Claims 1-3, 5, and 8 is disclosed by Satechi, Apple, and Shen, and a POSITA would have had reason to combine them.

1. Shen

Shen discloses an adapter for a payment accessory. Ex. 1012, [0022]. In particular, “the accessory 124 is coupled to the housing 104 [of a mobile computing device 100] via an adapter 128 that is configured to engage with a battery well of the device 100. In other words, the accessory 124 can be readily attached and removed to and from the device.” Ex. 1012, [0022]; Ex. 1003, ¶ 245. “The adapter 128 includes an accessory bay on the outer side...facing away from the device 100 when the adapter 128 is installed in the battery well 300. The accessory bay is configured to receive the payment accessory 124.” Ex. 1012, [0033]; Ex. 1003, ¶ 245.

Furthermore, Shen discloses that “to enable continued access to the slots 212 and 216 when the accessory 124 is installed in the accessory bay of the adapter 128, at least one of the containment walls 508 includes a cutout at an outer edge thereof. In particular, the walls 508-1 and 508-3 include cutouts 540 extending along a portion of the width of the adapter 128 to enable access to the slot 216. Further, the wall 508-4 includes a cutout 544 to enable access to the card slot 212. The cutout 544 extends along a majority of a length of the wall 508-4 in this example.” Ex. 1012, [0038]; Ex. 1003, ¶ 246.

Claim 1; *see also* Ex. 1012, [0022]; Ex. 1003, ¶ 249. Thus, both the '567 Patent and Shen are in the same field of endeavor as they are both specifically directed to stands for supporting electronic devices. Ex. 1003, ¶ 249.

Shen is also analogous art because it is reasonably pertinent to the particular problem addressed by the inventor. Ex. 1003, ¶ 250. The '567 Patent addresses the problem of designing a support structure that accommodates an electronic device without obstructing physical access to its underlying features. Ex. 1001, 1:66-2:16; Ex. 1003, ¶ 250. Shen deals with this exact challenge. Specifically, Shen discloses a support adapter for a computing accessory that utilizes localized cutouts (cutouts 540 and 544) along its peripheral walls to ensure continued access to the docked device's functional features. Ex. 1012, [0038], FIG. 5; Ex. 1003, ¶¶ 247-248, 250. Because Shen provides a direct, structural solution to the problem of preserving access to obstructed device features within a support base, it logically would have commended itself to the inventor's attention when designing the claimed stand. Ex. 1003, ¶¶ 247-248, 250.

2. The Combination of Satechi, Apple, and Shen Discloses Every Element of Claims 1-3, 5, and 8

a. Claim 1

(1)/1.0/

The preamble of claim 1 is not limiting because it merely states the purpose or intended use of the alleged invention. It does not define any of the claim

limitations, which are set forth fully in the body of the claim (i.e., a mini-computer stand for use with a mini-computer that has a square perimeter with rounded corners).

To the extent the preamble is limiting, as shown below, Satechi discloses a stand or hub compatible with Mac mini, having a square perimeter with rounded corners. Ex. 1008, p. 1, figure in p. 3; Ex. 1003, ¶ 252.



Annotated Figure of Satechi



Annotated Figure of Satechi

In the same field of endeavor, Apple discloses Mac Mini M4 which is a mini-computer that has a square perimeter with rounded corners. Ex. 1006, figure in p. 2; Ex. 1003, ¶ 253.



Annotated Figure of Apple

In the same field of endeavor, Shen discloses an adapter for a payment accessory, which is a mini-computer. Ex. 1012, [0022]; Ex. 1003, ¶ 254.

(2) [1.1]

Satechi discloses this Element. Ex. 1003, ¶¶ 255, 257.

Specifically, Satechi discloses a top configured for placement of the mini-computer. Ex. 1008, figure in p. 3; Ex. 1003, ¶ 256.



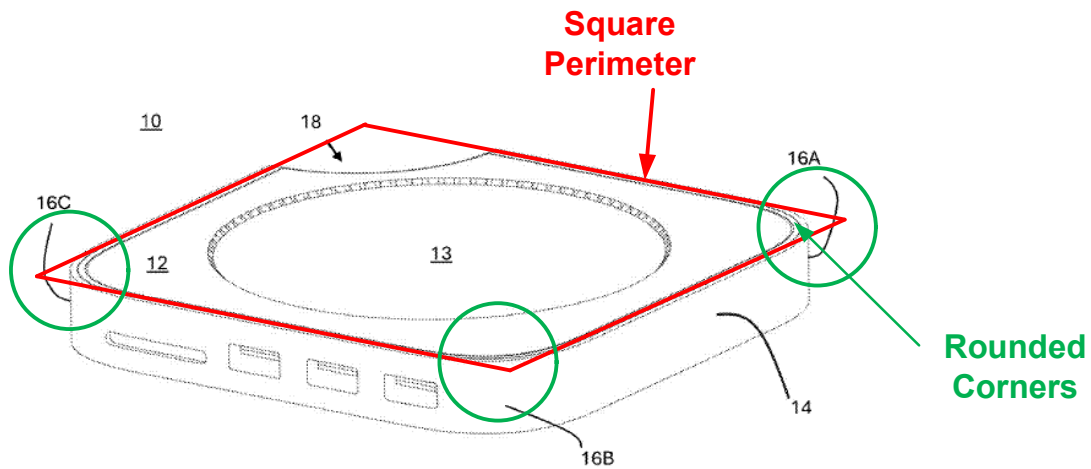
Annotated Figure of Satechi

(3) [1.2]

Satechi discloses this Element. Ex. 1003, ¶¶ 258, 260.

Satechi discloses that the stand has a perimeter that is square with a plurality of rounded corners. Ex. 1003, ¶ 259.

Specifically, as shown in the figure (reproduced below), Satechi's stand has a square perimeter (annotated in red) with a plurality of rounded corners (annotated in green). Ex. 1008, figure in p. 3; Ex. 1003, ¶ 259.



Annotated FIG. 3A of the '567 Patent



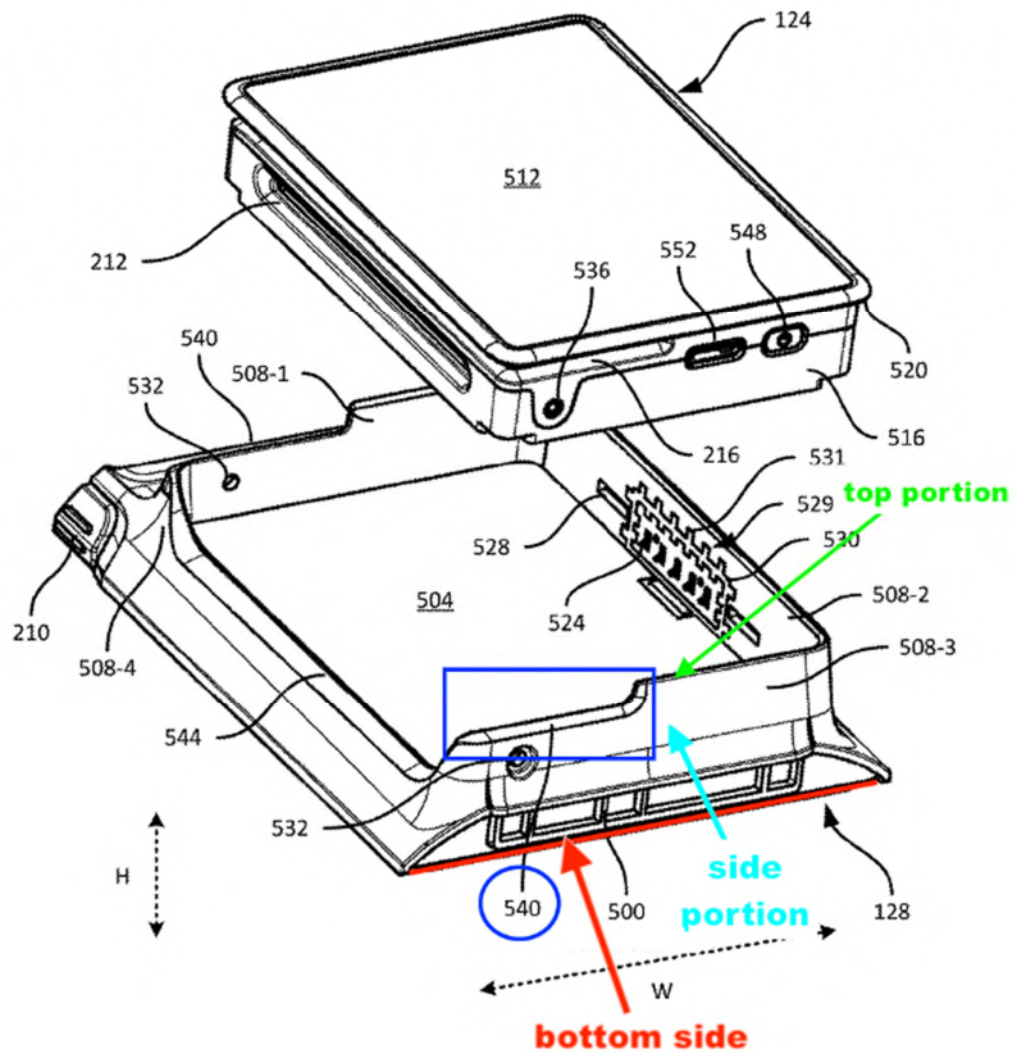
Annotated Figure of Satechi

(4)[1.3]

The combination of Satechi, Apple, and Shen discloses this Element. Ex. 1003, ¶ 261.

First, Satechi discloses a stand or hub compatible with Mac mini. Ex. 1008, p. 1; Ex. 1003, ¶ 262.

Furthermore, Shen discloses a known structure: cutouts 540 formed in the upper left of the accessory bay of the adapter, spanning top and side portions of the accessory bay without extending through a bottom side of the accessory bay, which is adapted to expose an underlying feature of the accessory through the cutouts 540 when the accessory is placed on the top of the accessory bay. Ex. 1012, [0038], FIG. 5; Ex. 1003, ¶ 264. “In the illustrated example, to enable continued access to the slots 212 and 216 when the accessory 124 is installed in the accessory bay of the adapter 128, at least one of the containment walls 508 includes a cutout at an outer edge thereof. In particular, the walls 508-1 and 508-3 include cutouts 540 extending along a portion of the width of the adapter 128 to enable access to the slot 216. Further, the wall 508-4 includes a cutout 544 to enable access to the card slot 212. The cutout 544 extends along a majority of a length of the wall 508-4 in this example.” Ex. 1012, [0038]; Ex. 1003, ¶ 264.



Annotated FIG. 5 of Shen

In addition, Apple discloses that the power button is located on the rear left of the Mac Mini M4. Ex. 1006, figure in p. 2; Ex. 1003, ¶ 262.



Annotated Figure of Apple

As a threshold matter, a POSITA would readily understand the physical orientation of these devices. Ex. 1003, ¶ 262. Because the Mac mini has a designated rear or back side, placing the Mac mini on top of Satechi's stand dictates that the Hub will correspondingly have a front side and a back side. Ex. 1003, ¶ 262. Consequently, when aligned during use, there will necessarily be two back corners on Satechi's square Hub from its plurality of rounded corners that correspond directly to the two back corners of the Mac mini. Ex. 1003, ¶ 262.



Reproduced Figure of Satechi

Guided by Satechi's disclosure of a stand or hub compatible with Mac mini, a mini-computer (Ex. 1008, p. 1), a POSITA would naturally seek to use Satechi's stand with the Mac mini M4 disclosed in Apple. Ex. 1003, ¶ 263. Because placing the Mac mini M4 on Satechi's stand obstructs the bottom rear-left power button, a POSITA would be motivated to resolve this known accessibility issue by redesigning the docking station with a dedicated power-button access feature, that is, a cutaway to expose the back bottom portion of the mini-computer corresponding to the power button on the rear left of the Mac Mini M4, such that a user can access the power button when the mini-computer is placed on the top of the mini-computer stand. Ex. 1003, ¶ 263.

Thus, Satechi in view of Apple and Shen discloses each and every limitation of [1.3]. A POSITA would have been motivated to implement Shen's cutout 540 in Satechi's stand when placing the Mac mini M4 on Satechi's stand. Ex. 1003, ¶¶ 265-269. As discussed in Section III.J.3 below, a POSITA would have been motivated and able to modify Satechi and Apple by using Shen's cutout 540, and thus reach

the combination of Satechi, Apple, and Shen that discloses all of the limitations of [1.3].

b. Claim 2

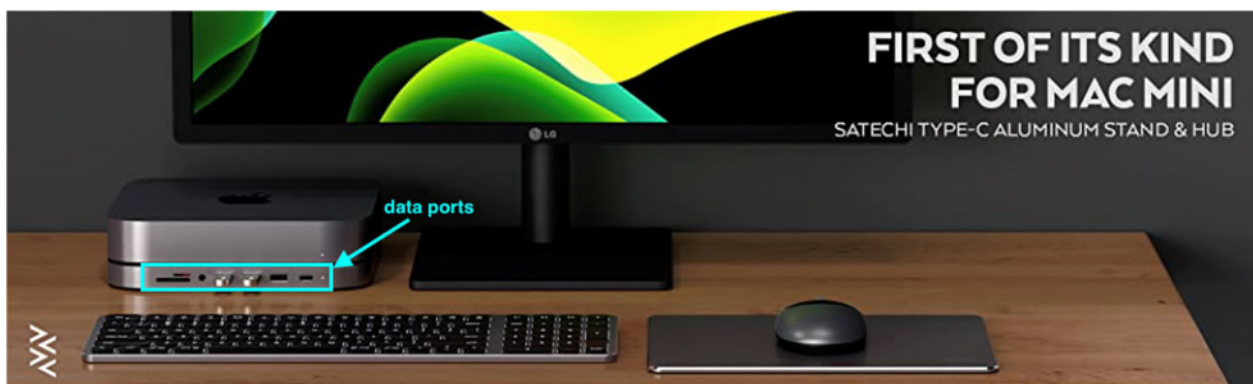
(1)[2.0]

Same as Ground 6, Elements [1.0]-[1.3].

(2)[2.1]

Satechi discloses this Element. Ex. 1003, ¶¶ 271, 273.

Specifically, Satechi discloses a stand or hub compatible with Mac mini having data ports positioned on the front side of the stand. Ex. 1008, pp. 1, 3; Ex. 1003, ¶ 272. As shown below, the data ports are located on the user-facing front side opposite a back side of the stand, which includes a back corner corresponding to a back bottom portion of the mini-computer, so that the users can easily access the data ports when the mini-computer is placed onto the stand. Ex. 1008, figure in p. 2; Ex. 1003, ¶ 272.



Annotated Figure of Satechi

A POSITA would understand that this front side is opposite a back side of the stand, and that the back side includes a back corner corresponding to a back bottom portion of the mini-computer, so that the users can easily access the data ports (and corresponding indicating lamp) when the mini-computer is placed on the stand. For example, in the product listed in Satechi, the data ports are located on the user-facing front side, opposite the back side that aligns with the back portion of the mini-computer. Ex. 1003, ¶ 272.

c. Claim 3

(1)[3.0]

Same as Ground 6, Elements [1.0]-[1.3].

(2)[3.1]

Satechi discloses this Element. Ex. 1003, ¶¶ 275, 277.

As shown below, Satechi discloses that the various data ports include “an USB-C data port, three USB 3.0 ports, micro/SD card readers, and a 3.5 mm headphone jack port” positioned on the front side of the stand “for convenient access to your essential peripherals.” Ex. 1008, pp. 2-3; Ex. 1003, ¶ 276.



Annotated Figure of Satechi

d. Claim 5

(1)[5.0]

Same as Ground 6, Elements [1.0]-[1.3].

(2)[5.1]

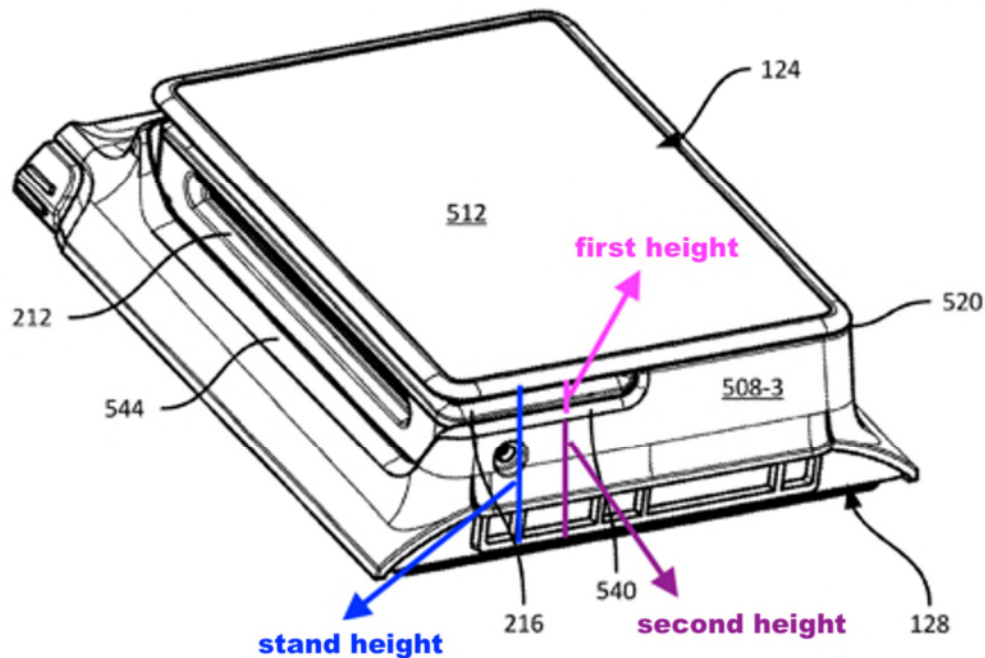
Shen discloses this Element. Ex. 1003, ¶¶ 279, 282.

Shen discloses that the charging stand has a) a first height that defines a beginning of the cutaway in the side portions and b) a second height that defines an end of the cutaway in the side portions; the charging stand has a stand height that is a sum of the first height and the second height; and the second height is greater than the first height. Ex. 1012, FIG. 7; Ex. 1003, ¶ 280.

As illustrated in FIG. 7 (reproduced below) of Shen, the base has a first height (annotated in pink) that defines a beginning of the cutaway in the side portions and a second height (annotated in purple) that defines an end of the cutaway in the side portions. The stand height (annotated in blue) of the charging stand is a sum of the

first height and the second height and the second height is greater than the first height.

Ex. 1003, ¶ 281.



Annotated FIG. 7 of Shen

e. Claim 8

(1) [8.0]

Same as Ground 6, Elements [1.0]-[1.3].

(2) [8.1]

Satechi discloses this Element. Ex. 1003, ¶¶ 284, 288.

Apple discloses the Mac Mini M4, which is a mini-computer that has a square perimeter with rounded corners. Ex. 1006, figure in p. 2; Ex. 1003, ¶ 285.



Annotated Figure of Apple

Satechi discloses that a mini-computer comprises the perimeter that is square with rounded corners, and that the perimeters of the mini-computer and the mini-computer stand are substantially the same size. Ex. 1008, p. 3; Ex. 1003, ¶286. When placing the Mac Mini M4 on Satechi's stand, Satechi's stand seamlessly enables access to the back bottom portion of the Mac Mini M4 through the cutout 540 of Shen. Ex. 1003, ¶ 286.



Annotated Figure of Satechi



Annotated Figure of Satechi

As discussed in Section III.J.3 below, a POSITA would have been motivated and able to reach the combination of Satechi, Apple, and Shen that discloses all of the limitations of [8.1].

3. A POSITA Would Have Had Reason to Combine Satechi with Apple and Shen

A POSITA would have had reason to combine Satechi with Apple and Shen based on design incentives, market forces, and the predictable application of known structural techniques to solve a recognized problem. Ex. 1003, ¶ 290.

As established above, Satechi, Apple, and Shen are analogous art because they are from the same field of endeavor – namely, support structures and accessories for mini-computers and electronic devices – and are reasonably pertinent to the problem of accommodating structural device features within a stand. Ex. 1003, ¶ 291.

Satechi teaches a stand specifically matched with the MAC mini. Ex. 1008; Ex. 1003, ¶ 292. Apple discloses the Mac Mini M4, released on October 29, 2024, which features a power button uniquely located on its bottom rear left corner. Ex. 1006; Ex. 1003, ¶ 292. A POSITA placing the Mac mini M4 of Apple onto Satechi's stand would immediately recognize a functional conflict: the docking station would block access to the power button. Ex. 1003, ¶ 292.

This accessibility problem, and its structural solution, were instantly recognized by the public and POSITAs. On October 29 and 30, 2024, public forums noted that users “can’t put a dock below the mini because of the power button” and

concluded that “[i]t would be trivial to put a recess in that corner to accommodate a finger.” Ex. 1011, pp. 2, 7; Ex. 1003, ¶ 293. This constitutes contemporaneous evidence that market-driven design needs prompted an obvious, predictable variation. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007) (The Supreme Court held that “design incentives and other market forces can prompt variations of [known devices],” and that “if a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability.”)

To implement this “trivial” recess, a POSITA would look to known support structures in the same field of endeavor. Shen teaches providing a cutout or cutaway in the periphery of a base to access underlying device features (specifically, a card slot), Ex. 1012, [0038], FIG. 5; Ex. 1003, ¶ 294. Because a POSITA is a person of ordinary creativity, not an automaton, they would readily recognize that Shen’s peripheral cutaway technique is readily transferable to any stand that needs to preserve physical or visual access to an underlying device feature. Ex. 1003, ¶ 294. Furthermore, this modification represents the application of a known technique (Shen’s method of providing a cutaway in the top and side portions that does not extend through the bottom) to a known device ready for improvement (Satechi’s stand). Ex. 1003, ¶ 294.

Even considering the minor differences in style between Shen, an adapter with a recessed accessory bay featuring containment walls, and Satechi, a flat stacking-

style dock, such minor structural distinctions would not deter a POSITA. Ex. 1003, ¶¶ 295-298. The test for obviousness is not whether the structures of two references can be bodily incorporated into one another, but whether a POSITA would be motivated to apply the teachings of the secondary reference to the primary one. *See In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012) (“It is well-established that a determination of obviousness based on teachings from multiple references does not require an actual, physical substitution of elements”); *see also Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1380–81 (Fed. Cir. 2023) (reversing the Board for erroneously requiring a physical combination of components and reaffirming that an obviousness analysis “does not require an actual, physical substitution of elements”).

Here, Shen teaches the structural design principle of forming a localized cutout (540, 544) along an outer peripheral edge to maintain physical access to an otherwise obstructed feature (e.g., a card slot) on a mated device. Ex. 1008, [0038]; Ex. 1003, ¶ 295. A POSITA would readily recognize that Shen’s peripheral cutaway technique represents a routine, universally applicable design choice for electronic support structures. Ex. 1003, ¶ 295. Because the location of the Mac Mini M4 power button is fixed, a POSITA faced with the known accessibility problem would have a finite number of predictable solutions. Ex. 1003, ¶ 295. Applying Shen’s cutout technique to the corresponding upper back corner of Satechi’s flat dock requires nothing more than ordinary creativity. Ex. 1003, ¶ 295. It seamlessly resolves the

accessibility conflict without altering the primary weight-bearing function of Satechi's stand, yielding the claimed structure with a high expectation of success. Ex. 1003, ¶ 295.

Under *KSR*, “[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp.” *KSR*, 550 U.S. at 421. Because the location of the M4 power button was fixed by Apple, placing a corner cutaway corresponding to that exact location using Shen's teachings represents routine engineering design among a finite number of predictable solutions. Ex. 1003, ¶ 296. A POSITA would have had a reasonable expectation of success in modifying Satechi with Shen's cutout, as doing so requires only standard manufacturing techniques and does not alter the primary supporting function of Satechi's stand. Ex. 1003, ¶¶ 266-268, 297. Ultimately, this predictable variation yields the expected result of maintaining device support while enabling finger access to the power button. Ex. 1003, ¶¶ 268, 298.

K. Ground 7: Claims 4 and 7 Are Rendered Obvious over Satechi in View of Apple, Shen, and Liao

1. The Combination of Satechi, Apple, Shen, and Liao Discloses Every Element of Claims 4 and 7

a. Claim 4

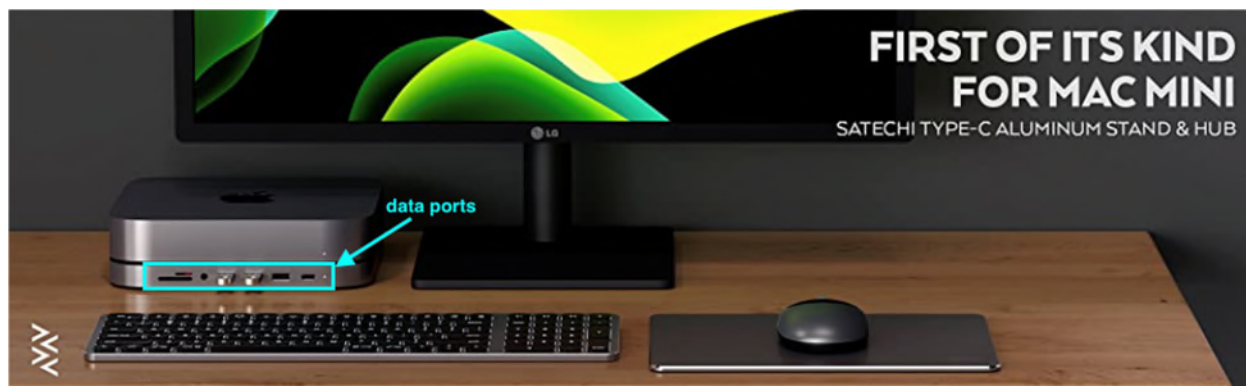
(1)[4.0]

Same as Ground 6, Elements [1.0]-[1.3].

(2)[4.1]

Satechi and Liao disclose this Element. Ex. 1003, ¶¶ 299, 304.

Satechi discloses a front side and an opposite back side that includes a back corner, and a data port on the front side. Ex. 1008, figure in p. 2; Ex. 1003, ¶ 300.



Annotated Figure of Satechi

Further, as shown in the figure reproduced below, Satechi discloses a USB-C connection at the back side of the stand, compatible with Mac mini 2018 and later versions. Ex. 1008, p. 1; Ex. 1003, ¶ 301. Satechi discloses that the stand is “[d]esigned to function as both a stand and an USB hub for your 2018 & later Mac Mini – all using a single Type-C connection.” Ex. 1008, p. 3; Ex. 1003, ¶ 301.

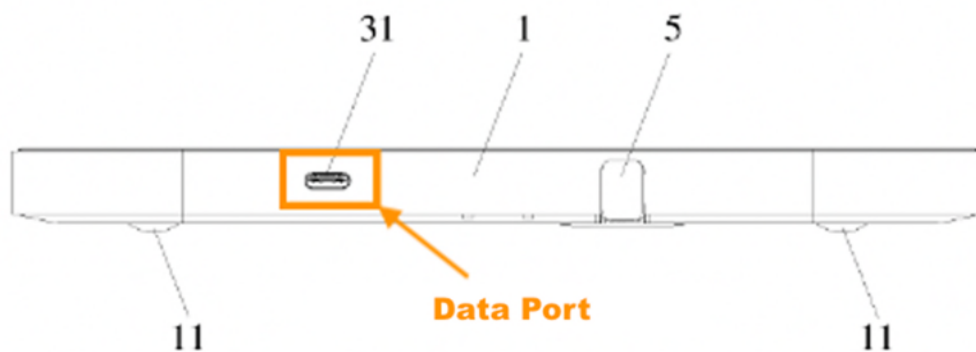


Reproduced Figure of Satechi

Liao discloses a front side and an opposite back side that includes the back corner; and a data port on the front side and another data port on the back side of the mini-computer stand to form a hub because Liao discloses a Mac Mini adapter for supporting a Mac Mini computer. Ex. 1010, [0044]; Ex. 1003, ¶ 302. As shown in FIGS. 3 and 4 (reproduced below), Liao discloses that the hub (corresponding to the mini-computer stand in [4.1]) includes data ports on both the front side and the back side that are opposite to each other and the back side has a back corner. Ex. 1010, FIGS. 3, 4; Ex. 1003, ¶ 302.



Annotated FIG. 4 of Liao



Annotated FIG. 3 of Liao

A POSITA would have been motivated to implement Liao's data ports in Satechi's stand when placing the Mac mini M4 on Satechi's stand to provide additional available surface area, enabling more flexible and spacious data port placement. Ex. 1003, ¶ 303. Further, a POSITA would have been motivated to replace the USB-C connection at the back side of Satechi with Liao's data port so that the connection could be more flexible. Ex. 1003, ¶¶ 303-304.

As discussed in Section III.K.2 below, a POSITA would have been motivated and able to modify Satechi, Apple, and Shen by using Liao's data ports, and thus

reach the combination of Satechi, Apple, Koshiishi and Liao that discloses all of the limitations of [4.1].

b. Claim 7

(1)[7.0]

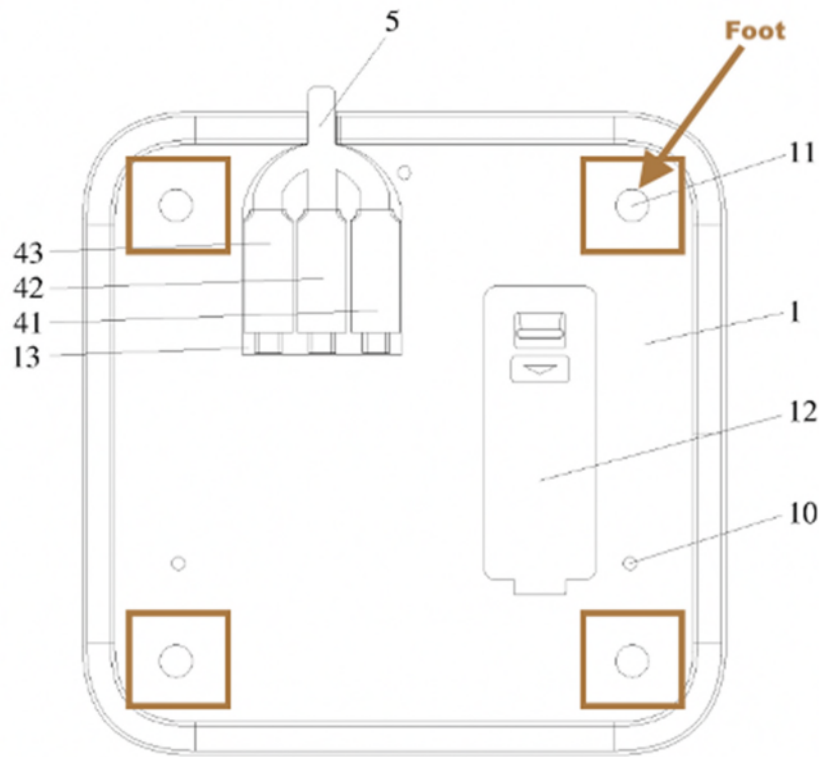
Same as Ground 6, Elements [1.0]-[1.3].

(2)[7.1]

Liao discloses this Element. Ex. 1003, ¶¶ 306, 310.

Specifically, Liao discloses that “several anti-slip rubber pads 11 are uniformly spaced on the side of the base 1 facing away from the upper cover 2. This structure, on the one hand, has several anti-slip rubber pads 11 that provide anti-slip function; on the other hand, the base 1 can be spaced apart from the plane to prevent liquid on the plane from flowing into the adapter or electronic device, thereby improving the safety and reliability of the adapter or electronic device.” Ex. 1010, [0049]; Ex. 1003, ¶ 307.

As shown in FIG. 5 (reproduced below), Liao discloses a plurality of feet (annotated in brown) coupled to the bottom side of the base docking station that is opposite the top. Ex. 1010, FIG. 5; Ex. 1003, ¶ 308.



Annotated FIG. 5 of Liao

A POSITA would have been motivated to implement the rubber pads of Liao to the bottom of Satechi’s stand to “provide anti-slip function” and “to prevent liquid on the plane from flowing into the adapter or electronic device, thereby improving the safety and reliability of the adapter or electronic device.” Ex. 1010, [0049]; Ex. 1003, ¶¶ 309-310.

2. A POSITA Would Have Had Reason to Combine Satechi with Apple, Shen, And Liao

For Claims 4 and 7, which requires data ports on both the front and back sides of the stand and a plurality of feet on the bottom of the stand, a POSITA modifying

Satechi's stand to accommodate the Mac mini M4 would have been motivated to incorporate the distributed port and rubber feet teachings of Liao. Ex. 1003, ¶ 312.

As established above, adapting Satechi for the Mac mini M4 requires structurally modifying a rear corner to provide power button access. Ex. 1003, ¶ 313. Recognizing that this physical cutout reduces the available internal volume and structural continuity of the stand, a POSITA would naturally seek to optimize the placement of Satechi's internal components and external data ports. Ex. 1003, ¶ 313. Liao demonstrates the well-known industry solution for Mac mini hubs: distributing data ports across multiple faces, specifically positioning them on both the front side and the opposite back side. Ex. 1003, ¶ 313.

A POSITA would have been motivated to apply Liao's distributed configuration to Satechi's stand to maximize available surface area, alleviate wire clutter on the user-facing side, and provide flexible connection between the stand and device. Ex. 1003, ¶¶ 303, 313-314. A POSITA would have had a reasonable expectation of success in making this modification, as relocating or adding standard data ports to an opposing face of a housing is a routine engineering task that does not alter the primary supporting function of the dock. Ex. 1003, ¶¶ 303, 313-314. Modifying the primary combination to include ports on both the front and rear faces represents a routine design choice that yields the predictable result of facilitating convenient connection, maximizing the available surface area, and enabling more

flexible, spacious data port placement without cluttering a single side of the device. Ex. 1003, ¶¶ 303, 313-314.

Further, because Satechi's stand is intended to rest on a desk or similar surface while supporting Mac mini, a POSITA would have understood that rubber feet are a common and predictable solution for increasing friction between Satechi's stand and the supporting surface, thereby reducing sliding caused by cable tension, vibration, or incidental contact. Ex. 1003, ¶¶ 315-316. A POSITA also would have understood that rubber feet help cushion the stand's contact with the desk and reduce the risk of scratching or marring the surface. Ex. 1003, ¶¶ 315-316. Therefore, incorporating rubber feet at the bottom of the stand would have represented a routine design choice yielding the predictable benefits of enhanced grip, surface protection, and overall user convenience. Ex. 1003, ¶¶ 315-316.

L. Ground 8: Claim 6 Is Rendered Obvious over Satechi in View of Apple, Shen, and Koshiishi

1. The Combination of Satechi, Apple, Shen, and Koshiishi Discloses Every Element of Claim 6

a. Claim 6

As detailed in Ground 9 below, Petitioner maintains that the term “horizontally curved surface” in Claim 6 is indefinite under 35 U.S.C. § 112 because it fails to inform a POSITA of the claim scope with reasonable certainty. However, to the extent the Board finds the term amenable to construction, or adopts any

construction proposed by the Patent Owner to save the claim from indefiniteness, Koshiishi discloses this feature under any such reasonable interpretation. Ex. 1003, ¶ 317.

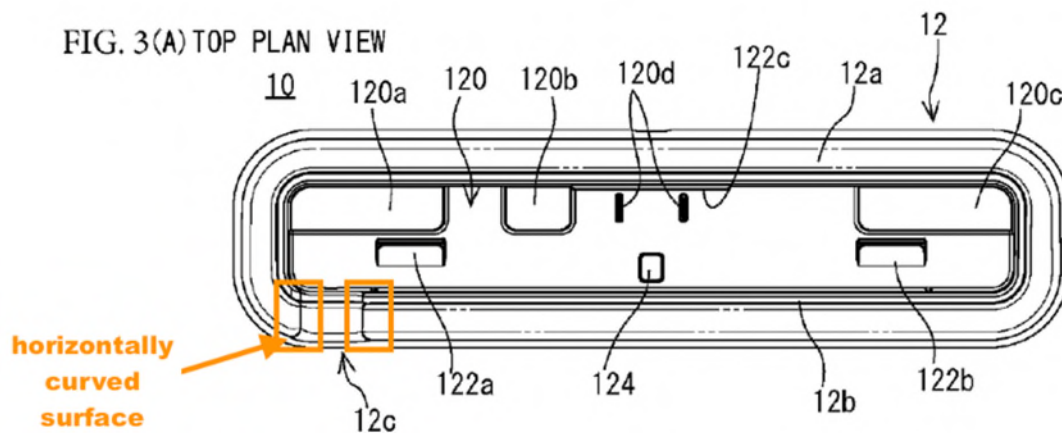
(1)[6.0]

Same as Ground 6, Elements [1.0]-[1.3].

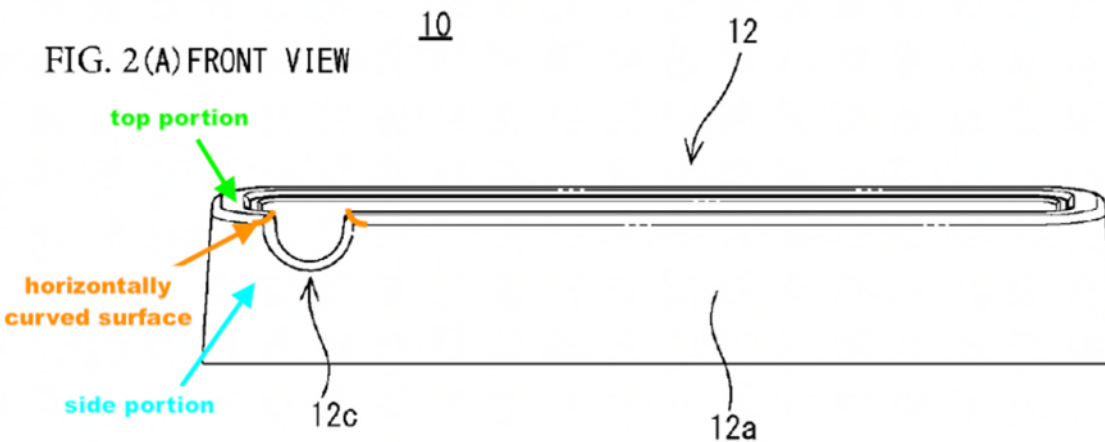
(2)[6.1]

Koshiishi discloses this Element. Ex. 1003, ¶¶ 318, 320.

As shown in FIGS. 2(A) and 3(A) (reproduced below), Koshiishi discloses that the charging stand has a horizontally curved surface that defines the notch 12c in the top and the side portions. Ex. 1007, FIGS. 2(A), 3(A); Ex. 1003, ¶ 319.



Annotated FIG. 3(A) of Koshiishi



Annotated FIG. 2(A) of Koshiishi

A POSITA would have been motivated to implement the horizontally curved surface of Koshiishi's notch 12c in Shen's cutouts when that surface has substantial width. Ex. 1003, ¶ 320. As discussed in Section III.L.2 below, a POSITA would have been motivated and able to modify Satechi, Apple, and Shen by using the horizontally curved surface of Koshiishi's notch 12c, and thus reach the combination of Satechi, Apple, Shen, and Koshiishi that discloses all of the limitations of [6.1].

2. A POSITA would have had reason to combine Satechi with Apple, Shen, and Koshiishi

As established above, Satechi, Apple, Shen, and Koshiishi are analogous art because they are from the same field of endeavor – namely, support structures and accessories for mini-computers and electronic devices – and are reasonably pertinent to the problem of accommodating structural device features within a stand. Ex. 1003, ¶ 322.

A POSITA would have had a reasonable expectation of success in implementing a horizontally curved surface of Koshiishi's notch in Shen's cutouts when that surface has substantial width, as rounding or curving an exposed edge or surface is a routine industrial-design and mechanical-design modification that does not alter the primary supporting function of the stand or the cutaway's function of exposing the corresponding back bottom portion of the mini-computer. Ex. 1003, ¶ 323. Modifying the primary combination to include a horizontally curved surface along a relatively wide cutaway surface represents a routine design choice that yields the predictable result of improving the visual appearance of the cutaway and reducing the likelihood that a user's fingers or the device itself would be scratched against a sharper exposed edge during normal use. Ex. 1003, ¶ 323.

M. Ground 9: Claim 6 is Indefinite in View of the Term “horizontally curved surface”

Claim 6 is indefinite under 35 U.S.C. § 112 in view of the term “horizontally curved surface,” because when viewed in light of the specification and prosecution history, it fails to inform those skilled in the art about “the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014). Petitioner presents this as an alternative ground; to the extent the Board adopts a construction that preserves Claim 6 from indefiniteness, Petitioner has separately demonstrated in Grounds 1, 4, 6, and 8 that Claim 6 is unpatentable under § 103.

As background, Claim 1 requires “wherein a back corner from the plurality of rounded corners of the mini-computer stand comprises a cutaway in top and side portions of the back corner that does not extend through a bottom side of the mini-computer stand, which is adapted to expose a corresponding back bottom portion of the mini-computer through the cutaway when the mini-computer is placed on the top of the mini-computer stand.” Ex. 1001, Claim 1; Ex. 1003, ¶ 325. Claim 6 attempts to narrow this claim by specifying that “the back corner comprises a horizontally curved surface that defines the cutaway in the top and the side portions of the back corner.” Ex. 1001, Claim 6; Ex. 1003, ¶ 325.

The term “horizontally curved surface” is not a term of art and has no particular meaning to a person of ordinary skill in the art in the field of the ’567 Patent. The claim language does not provide an objective boundary for claim scope, either. Ex. 1003, ¶ 326. First, the word “curved” could plausibly refer to any non-flat or rounded portion of the back corner, and the claim provides no standard for determining which shapes qualify and which do not. Second, the claim does not identify the relevant frame of reference for “horizontally.” For example, whether “horizontally” is measured relative to the stand, the top surface, the ground, or some other plane. Third, the claim does not specify which “surface” must be horizontally curved, or how that surface must relate to the cutaway in order to “define[] the cutaway.” Ex. 1003, ¶ 327. Because the term supplies no objective boundary

separating covered shapes from uncovered ones, it fails to provide reasonable certainty as to claim scope. *Nautilus*, 572 U.S. at 911 (“It cannot be sufficient that a court can ascribe *some* meaning to a patent’s claims”); *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370-71 (Fed. Cir. 2014)(“unobtrusive manner” indefinite because the patent provided no objective boundaries for those of skill in the art); *Pac. Coast Bldg. Prods. v. CertainTeed Gypsum, Inc.*, 816 F. App'x 454, 459 (Fed. Cir. 2020)(“While the claims recite a particular value for ‘scored flexural strength,’ ...the claims and specification fail to explain what the value represents or how to consistently and reproducibly measure this new characteristic.”).

The specification and prosecution history provide no guidance whatsoever, in fact, neither the specification nor the prosecution history ever used the term “horizontally curved surface.” *See* Ex. 1001; Ex. 1003, ¶ 328. The inventors provide no guidance on which shapes are intended to fall within the scope of Claim 6. This renders the claim indefinite. *Mantissa Corp. v. First Fin. Corp.*, No. 2022-1963, 2024 WL 607717, at *7 (Fed. Cir. Feb. 14, 2024) (affirming indefiniteness of “transaction partner” when the term does not appear in the specification or original claims; the prosecution history did not discuss or explain the meaning of the term; and there is also no commonly accepted definition for the term in the art).

For these reasons, the term “horizontally curved surface” renders Claim 6 indefinite under 35 U.S.C. § 112, and the claim should be canceled. However, to the

extent the Board determines the term is amenable to construction or adopts a construction proposed by Patent Owner, Petitioner has alternatively demonstrated in Grounds 1, 4, 6, and 8 that Claim 6 is unpatentable under any such reasonable interpretation without conceding definiteness.

IV. NON-REDUNDANCY OF GROUNDS

Petitioner presents multiple grounds of unpatentability to preempt potential Patent Owner arguments regarding analogous art, and to provide the Board with the most comprehensive view of the state of the art. To aid the Board's efficient administration of the proceeding under 35 U.S.C. § 316(b), Petitioner submits that the grounds presented are not merely cumulative or redundant; each relies on references that provide distinct structural and functional teachings.

Ye, Liao, and Satechi represent distinct structural approaches to mini-computer support architectures. Ex. 1003, ¶¶ 43-44, 120, 127-128, 144. In particular, Grounds 1-3 use Ye as a primary Mac mini base/docking reference, Ye provides a base docking station characterized by an integrated structural frame, a top placement surface, and a geometric transition between the top and side walls. Ex. 1005, [0024], FIG. 1; Ex. 1003, ¶¶ 43-44. Grounds 4-5 use Liao as an alternative hub/adaptor architecture, Liao provides an alternative primary structure focused on a distributed hub adaptor configuration, teaching data ports on opposing front and back sides. Ex. 1010, FIGS. 3, 4; Ex. 1003, ¶144. Grounds 6-8 use Satechi as a commercial Mac

mini hub/stand, Satechi provides a commercial hub demonstrating precise perimeter/footprint matching to the mini-computer alongside a fully user-facing port arrangement. Ex. 1008, pp. 1, 3; Ex. 1003, ¶¶ 120, 127-128. Presenting these distinct starting points ensures the Board has complete prior art context regardless of how Patent Owner attempts to narrow the base structure limitations.

To satisfy the “cutaway” limitation, Koshiishi and Shen are relied on for different cutaway/access teachings: Koshiishi for a localized curved notch that preserves access or visibility to an otherwise obstructed device feature; and Shen for elongated cutouts in a flatter accessory structure. In particular, Koshiishi discloses a curved notch 12c on a charging stand, which provides explicit support for the “horizontally curved surface” limitation of Claim 6. Ex. 1003, ¶¶ 58, 104. Shen discloses elongated edge cutouts (540, 544) for a flat accessory bay. Ex. 1003, ¶¶ 246, 248. Relying on Shen provides a distinct geometric and functional teaching that preempts any argument by Patent Owner that the vertical orientation of Koshiishi’s device cannot be applied to flat docking stations.

These differences address distinct anticipated Patent Owner responses and are not merely repetitive presentations of the same theory.

V. CONCLUSION

Petitioner respectfully requests that the Board institute a PGR for Claims 1–8 of the ’567 Patent and find the claims unpatentable.

Date: June 25, 2026

Respectfully submitted,

/Hao Tan/

Hao Tan
Arch & Lake LLP
203 N LaSalle Street, Suite 2100
Chicago, IL 60601
Tel. No. 312.375.9408
Fax No. 312.614.1873
HaoTan@archlakelaw.com

Attorney For Petitioner

CERTIFICATE OF WORD COUNT

I hereby certify that the foregoing Petition for *Post Grant Review* of U.S. Patent No. 12,436,567 includes 18,686 words (as calculated by Microsoft Word), excluding those in the table of contents, table of authorities, mandatory notices, certificate of service, certificate of word count, and appendix of exhibits. Accordingly, this Petition is under the word count limit of 18,700 words.

Date: June 25, 2026

Respectfully submitted,

/Hao Tan/

Hao Tan
Arch & Lake LLP
203 N LaSalle Street, Suite 2100
Chicago, IL 60601
Tel. No. 312.375.9408
Fax No. 312.614.1873
HaoTan@archlakelaw.com

Attorney For Petitioner

CERTIFICATE OF SERVICE

I hereby certify on June 25, 2026, that a true and correct copy of the Petition for *Post Grant Review* of U.S. Patent No. 12,436,567 was served in its entirety via e-mail and FedEx to the Patent Owner by serving the correspondence address of record for the '567 Patent:

BIOTECH BEACH LAW PC
11622 EL CAMINO REAL
SUITE 100
SAN DIEGO, CA 92130
UNITED STATES

Date: June 25, 2026

Respectfully submitted,

/Hao Tan/

Hao Tan
Arch & Lake LLP
203 N LaSalle Street, Suite 2100
Chicago, IL 60601
Tel. No. 312.375.9408
Fax No. 312.614.1873
HaoTan@archlakelaw.com

Attorney For Petitioner