UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HANGZHOU TAIHE TRADING CO., LTD. and
NINGBO LIKEJU TRADING CO., LTD.,

Petitioner,

v.

EP FAMILY CORP.,

Patent Owner.

Case IPR2023-00658
Patent D934,012

PATENT OWNER'S REPLY TO
PETITIONER'S OPPOSITION TO MOTION TO AMEND

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EXHIBIT LIST

Exhibit No.	Description
2001	Translation of Bordonabe Furniture
2002	Office Action, App. No. 29/693,716 Prosecution History, June 25, 2021
2003	Notice of Cited References, App. No. 29/693,716 Prosecution History, Apr. 21, 2021 and Oct. 1, 2021
2004	U.S. Patent No. 2,755,153 to J. Pucci et al. (the "'153 Patent")
2005	U.S. 2,715,558 to Bell (the "'558 Patent")
2006	Declaration of Expert Witness Robert Williams
2007	Curriculum Vitae of Expert Witness Robert Williams
2008	Albert Jackson, David Day, and Simon Jennings, *The Complete Manual of Woodworking* (1989)
2009	*Fine Woodworking on Joinery* (1985)
2010	James Krenov, *The Impractical Cabinetmaker* 19 (1993)
2011	Chris Marshall, *Accounting for Cross-grain Wood Movement on Breadboard Ends?*, Woodworkers Journal, (Feb 15, 2015) https://www.woodworkersjournal.com/accounting-cross-grain-wood-movement-breadboard-ends/
2012	Gary Rogowski, *The Complete Illustrated Guide to Joinery* (2002)
2013	Rockler, *Beadlock® Tenon Stock* (Last accessed March 26, 2024) https://www.rockler.com/beadlockreg-tenon-stock
2014	*Lamello Catalogue 2015/2016* (2015)

I. INTRODUCTION

Patent owner EP FAMILY CORP. (herein "EP Family") files this Reply to Petitioner's Opposition to Patent Owner's Motion to Amend ("MTA") the claim of US Design Patent D934,012 to Chang (the "'012 Patent"). Patent Owner respectfully argues each of Petitioner's arguments are overcome in the reply below and the proposed amendment to the claim of the '012 Patent should be allowed.

II. THE PROPOSED CLAIM AMENDMENTS ARE NOT PURELY FUNCTIONAL

Petitioner's arguments related to functionality and 37 C.F.R. §42.121 are misleading and incorrect. By presenting a single allegedly functional reason for the now claimed four holes and four tenons in the amended claim, Petitioner suggest that because there is a single functional use for the holes and tenons, they cannot possibly be claimed as ornamental subject matter in a design patent. Petitioner's focus on the functional aspects of individual elements of the claimed invention is not the correct analysis for a design patent.

"In determining whether a design is primarily functional or primarily ornamental the claimed design is viewed in its entirety, for the ultimate question is not the functional or decorative aspect of each separate feature, but the overall appearance of the article, in determining whether the claimed design is dictated by the utilitarian purpose of the article. *Lee v. Dayton- Hudson Corp*., 838 F.2d 1186, 1189, 5 USPQ2d 1625, 1627 (Fed.Cir.1988). See *Gorham Co. v. White*, 81 U.S. (14 Wall.) 511, 530, 20 L.Ed. 731 (1872)." *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1123 (Fed.Cir. 1993). Further, "when there are several ways to achieve the function of an article of manufacture, the design of the article is more likely to serve a primarily ornamental purpose. See *Avia Group International, Inc. v. L.A. Gear California, Inc.*,

853 F.2d 1557, 1563, 7 USPQ2d 1548, 1553 (Fed.Cir.1988)." *Id*. In *Automotive Body Parts Assn. v. Ford Global Technologies LLC*, the Federal Circuit stated: "We have often emphasized the presence or absence of alternative designs, noting that the existence of 'several ways to achieve the function of an article of manufacture,' though not dispositive, increases the likelihood that a design serves a primarily ornamental purpose." *Automotive Body Parts Assn. v. Ford Global Technologies LLC*, 930 F.3d 1314, 1319 (Fed.Cir. 2019). "[I]f other designs could produce the same or similar functional capabilities, the design of the article in question is likely ornamental, not functional." *Id*.

Patent Owner identifies seven alternative methods to join or connect two table top portions including: 1) the blind mortise and tenon joint, 2) the biscuit joint, 3) the pocket hole joint, 4) the tongue and groove joint, 5) the beadlock joint, 6) a Clamex P-14 Detachable Furniture Connector, and 7) the Tenso P-14 Detachable Furniture Connector. See *Williams Declaration* ¶¶ 24 – 46.

As there are multiple potential construction methods to choose from, the choice of construction method is clearly ornamental rather than purely functional. Further, there are many reasons why a furniture designer of ordinary skill in the art might choose tenons and holes for aesthetic reasons including historical or traditional design, visual balance and harmony, material construction considerations, brand identity or design language, and customer preferences/market trends. *Id. at* ¶¶47. There are clear ornamental design choices made in the placement of the tenons and holes in the '012 Patent. *Id.* at ¶¶48.

Further, Petitioner incorrectly states that because the method of joining the two table top portions is hidden in the final use, this design choice must be functional. This argument is in clear conflict with Federal Circuit precedent. Holding that the district court erred finding that an

article that is not exposed to view during use cannot be the subject of a design patent, the Federal Circuit stated in *Seiko Epson v. Nu-Kote*: "The validity of a design patent does not require that the article be visible throughout its use; it requires only that the design be of an article of manufacture and that the design meets the requirements of Title 35. See *Keystone Retaining Wall Systems, Inc. v. Westrock, Inc.*, 997 F.2d 1444, 27 USPQ2d 1297 (Fed. Cir. 1993) (design patent for wall blocks much of which are not visible after installation); *In re Webb*, 916 F.2d 1553, 16 USPQ2d 1433 (Fed. Cir. 1990) (design patent for a hip prosthesis that is not in view after implantation in patient)." *Seiko Epson v. Nu-Kote*, 190 F.3d 1360, 1368 (Fed. Cir. 1999).

The evidence shows that there are multiple alternative construction methods to join or connect two table top portions. As there are multiple options to produce this same function, the choice of which construction method is ornamental and should be treated as such. The proposed claim amendments are not purely functional and comply with 37 C.F.R. §42.121. Lastly, a feature that is hidden in use, such as the added tenons and holes, may still be the subject of a design patent.

III. ONE OF ORDINARY SKILL IN THE ART WOULD UNDERSTAND THE SCOPE OF THE AMENDED CLAIM

Petitioners argue that the scope of the amended claim is indefinite. Petitioner's indefiniteness claim is based on the remote hope that a single inconsistency in the '012 Patent's figures would make the claim indefinite to one of ordinary skill in the art. This argument does not stand up to review by one of ordinary skill in the art. The amended claim could be considered "indefinite under § 112 if one skilled in the art, viewing the design as would an ordinary observer, would not understand the scope of the design with reasonable certainty based on the claim and visual disclosure." *In re Maatita*, 900 F.3d 1369, 1377 (Fed. Cir. 2018).

One of ordinary skill in the art would understand how the tenons and holes should be positioned on each of the table top portions. Figs. 1 – 8 refer to the top portion of a table top, i.e. one of the two portions of the table top of the '012 Patent. *See '012 Patent*, Specification. Figs 9 – 15 refer to the bottom portion of the table top, specifically the second of two portions disclosed in the '012 Patent. *Id*. Lastly, Figs. 16 – 23 refer to the complete table top comprising two table top portions joined. *Id*. The previously disclaimed and now claimed holes of the first table top portion are shown in Figs. 1 and 6. The previously disclaimed and now claimed tenons of the first table top portion are shown in Fig. 8. The now claimed tenons of Fig. 8 are clearly included in the first table top portion.

Additional previously disclaimed and now claimed holes of the second table top portion are shown in Figs. 9 and 14. No tenons are shown in relation to the second table top portion. Based on these clear drawings, the now claimed tenons are to be included in with the first table top portion. Based on a clear reading of the amended Figures, there are no inconsistencies in the location of any now claimed holes or tenons.

The inclusion of the tenons in Fig. 8 clearly indicates that the tenons are included in the first, top portion of the table top. The lack of tenons visible in Figs. 1, 2 and 3 do not impact this clear understanding. Further, based on the figures of the '012 Patent, the top portion of the table top is the larger size table top portion. The bottom portion of the table top is smaller in size. It is common in table top construction for tenons to be included in the larger portion of the table top, which they are in amended Fig. 8 of the '012 Patent. Based on these observations related to the amended drawings and claim of the '012 Patent, the location of the tenons in the top portion of the table top is clear to one of ordinary skill in the art. See *Williams Declaration* ¶¶50 – 56.

The scope of amended claim of the ‘012 is clear and understandable to one of ordinary skill of the art and the claim should not be considered indefinite.

IV. THE PROPOSED AMENDMENTS ARE PATENTABLE OVER THE CITED PRIOR ART

Petitioner continues to argue that *Morgan* (Ex. 1004), *Bordonabe Furniture* (Ex. 1005, translation to English Ex. 2001), and *Iannaccone* (Ex. 1006) each operates as a primary reference. Patent Owner disagrees with this analysis and will summarize the arguments against each reference operating as a primary reference. Petitioner introduces *Carter* (Ex.1012) and argues that *Carter* operates as a secondary reference. Petitioner continues to cite *Galant* as a secondary reference in three of their alleged grounds of unpatentability for the amended claim.

Petitioner argues that the amended claim of the ‘012 Patent is unpatentable based on the following grounds of unpatentability:

Ground	Grounds of Unpatentability
1	*Morgan* (Primary) and *Carter* (Secondary) render obvious the amended claim under §103.
2	*Morgan* (Primary), *Carter* (Secondary), and *Galant* (Secondary) render obvious the amended claim under §103.
3	*Bordonabe Furniture* (Primary) and *Carter* (Secondary) render obvious the amended claim under §103.
4	*Bordonabe Furniture* (Primary), *Carter* (Secondary), and *Galant* (Secondary) render obvious the amended claim under §103.
5	*Iannaccone* (Primary) and *Carter* (Secondary) render obvious the amended claim under §103.
6	*Iannaccone* (Primary), *Carter* (Secondary), and *Galant* (Secondary) render obvious the amended claim under §103.

A. Ground 1 -- 35 USC §103 – Morgan and Carter

The test for obviousness for design patents is whether the claimed design would have been obvious to a designer of ordinary skill who designs articles of the type involved. *Spigen*

Korea Co. v. Ultraproof, Inc., 955 F. 3d 1379, 1383 (Fed. Cir. 2020). The question of fact is whether a prior art reference qualifies as a "primary reference." *Id.* "A 'primary reference' is a 'single reference that creates 'basically the same' visual impression as the claimed design. To be 'basically the same,' the designs at issue cannot have 'substantial differences in the[ir] overall visual appearance[s]'. Additionally, if 'major modifications' would be required to make a design look like the claimed design, then the two designs are not 'basically the same.'" *Id*.

If a primary reference exists, it is a question of fact whether an ordinary designer would have modified the primary reference with secondary references to create a design that has the same overall visual appearance as the claimed design. *Campbell Soup Co. v. Gamon Plus, Inc.*, 10 F.4th 1268, 1275 (Fed. Cir. 2021) A secondary reference may be used to modify a primary reference to create a design that has the same overall visual appearance as the claimed design. A secondary reference must be so related to the appearance of certain ornamental features in one reference to suggest the application of those features to the other reference. *MRC Innovations, Inc. v. Hunter MFG., LLP*, 747 F.3d 1326, 1331 (Fed. Cir. 2014).

Morgan discloses a folding table with two leaves, the leaves having a variety of potential positions, and attached to two crossed legs which pivot about a rod attached between the two legs at their crossing point. Further the legs and other mechanical features of *Morgan* are clearly different from the design disclosed in the '012 Patent. The '012 Patent discloses a separable table top for a standing desk, not a folding table. The '012 Patent does not show any suggested mechanization of the two portions of the table top disclosed in *Morgan*.

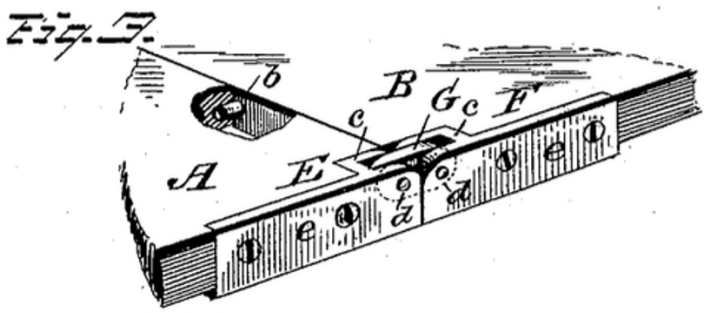
Further, *Morgan* is a folding table which does not make the same visual impression as the table top of the '012 Patent. Focusing on the design of the table top itself, *Morgan* has at least two different states impacting the visual impression of the table top: 1) folded and 2)

unfolded/extended. In both the folded and unfolded/extended states, the two table top portions are still attached to each other by hinges. Even if the hinges are excluded from the analysis, the table top portions are still always attached to each other.

In contrast, the table top claimed in the ‘012 Patent consists of two table top portions: 1) the top portion (seen in Figs 1 – 8), and 2) the bottom portion (seen in Figs. 9 – 15). The complete table top is shown in Figs. 16 – 23. Each of the figures contain material claimed as part of the amended claim of the ‘012 Patent. This claimed material forms the complete scope of the invention contained within the ‘012 Patent and should be included in any analysis. The various views of the ‘012 Patent relate to two distinct configurations: 1) before assembly, and 2) after assembly. Before assembly, the two table top portions of the ‘012 Patent are completely separate and give the visual impression of two separate table top portions, with the now claimed tenons and holes visible. After assembly, the table top of the ‘012 Patent is a single complete table top. The visual impression of the two table top portions of *Morgan*, which are always attached and hinged at the corner of the central edge is very different from the visual impression of the ‘012 Patent in its before assembly and after assembly states. The addition of the now claimed tenons and holes in the amended claim of the ‘012 Patent only further differentiates *Morgan* from the ‘012 Patent. See *Williams Declaration* ¶¶ 80 – 84. For the reasons outlined above, *Morgan* does not operate as a primary reference because *Morgan* does not create “basically the same” visual impression as the amended claim of ‘012 Patent. See *Id.* ¶¶ 60 – 63, 80 – 84.

Carter is yet another ancient folding table reference which does nothing to remedy the substantial design differences (failing to create the same visual impression) between *Morgan* and the ‘012 Patent. *Carter* is cited by Petitioner as disclosing the tenons and holes of the amended claim of the ‘012 Patent that are missing from *Morgan*. In fact, *Carter* discloses only a single

"dowel-pin b" in Fig. 3. Further, *Carter* does not discuss, suggest or disclose a complementary hole with which the dowel-pin b may couple. The disclosure in *Carter* related to the dowel-pin b is truly minimal, consisting of one portion of one figure and two lines of text, specifically "dowel-pins b being used to form a close joint when contacting edges of the sections A B come together" and a discussion of a hinge that "allows the inner edges of the sections A B to swing out a sufficient distance to release the dowel pins." *Carter* Fig. 3 shows:



See *Carter*, Fig. 3. This view shows a single dowel-pin b but no holes. Further, *Carter* does not suggest, discuss or disclose the possibility of adding more than one dowel-pin.

The amended claim of the '012 Patent requires four tenons and four holes. Petitioner argues that it would be obvious to one of ordinary skill in the art to expand the *Carter* reference to show four tenons ***and four holes***. Made in this specific context, that argument requires a truly significant leap of logic to suggest that the ornamental choice of the four tenons and holes required by the amended claim of the '012 Patent would be made obvious by the de minimis disclosure contained in *Carter*. Additionally, following Petitioner's argument to its ridiculous limit, *Carter's* minimal disclosure of a single dowel-pin, missing any reference or disclosure to any holes, would render obvious any ornamental arrangement of any number of tenons and

holes, including the number disclosed in the amended claim of the ‘012 Patent. This simply cannot be the appropriate result. Further, given the at least seven other methods of joining/connecting two portions of a table top, there is nothing disclosed or suggested in *Carter* that would make it obvious that a designer of ordinary skill in the art would be motivated choose this method, in the numbers required by the amended claim of the ‘012 Patent. *Carter* cannot be considered a secondary reference because combining *Carter* with Morgan does result in a design with the same visual impression as the ‘012 Patent. See *Williams Declaration* ¶¶ 86 – 90.

Morgan does not operate as a primary reference in the design patent §103 analysis and *Carter* does nothing to remedy that deficiency. The combination of *Carter* and *Morgan* does not render obvious the claimed design of the amended ‘012 Patent. *Id.* ¶63, 90.

B. Ground 2 -- 35 USC §103 – *Morgan*, *Galant* and *Carter*

For the reasons outlined above, *Morgan* does not operate as a primary reference and *Carter* does not operate as an appropriate secondary reference.

Galant discloses a single piece table top design, without two portions and does nothing to remedy any deficiencies in the combination of *Morgan* and *Carter*. *Id.* ¶63, 90, 92.

C. Ground 3 -- 35 USC §103 – *Bordonabe Furniture* and *Carter*

Petitioner cites four table designs contained in *Bordonabe Furniture* as primary references related to the ‘012 Patent: A, B, C, and E. The design features of the various *Bordonabe Furniture* designs and the ‘012 Patent show many significant differences resulting in a very different visual impression including: 1) a beveled front edge, 2) a recessed and beveled cut line between the lower and upper pieces and 3) an arched edge around the front 4) drawer under the workspace with an angled drawer, 5) various different leg designs, and in *Bordonabe Furniture* Design E, 6) the top piece having a cut line that does not reach the edge.

None of the figures or provided description in *Bordonabe Furniture* disclose or suggest the holes or tenons as required by the proposed amended claim of the '012 Patent. None of the cited *Bordonabe Furniture* designs act as a primary reference. For the reasons outlined above, designs A, B, C and E of *Bordonabe Furniture* do not provide basically the same visual impression as the claimed design due to the substantial differences in their overall visual appearances. See *Williams Declaration* ¶¶ 64 – 73.

For the same reasons outlined in relation to *Morgan*, *Carter* does not operate as a secondary reference in relation to any of the designs contained in *Bordonabe Furniture*. *Bordonabe Furniture* does not operate as a primary reference in the design patent §103 analysis and *Carter* does nothing to remedy that deficiency. The combination of *Bordonabe Furniture* and *Carter* does not render the claimed design of the amended '012 Patent obvious. *Id.* at 73, 90.

D. Ground 4 – 35 USC §103 – *Bordonabe Furniture, Galant,* and *Carter*

Galant discloses a single piece table top design, without two portions and does nothing to remedy any deficiencies in the combination of *Bordonabe Furniture* and *Carter*. *Id.* at 73, 90, 92.

E. Ground 5 – 35 USC §103 – *Iannaccone* and *Carter*

Design patent *Iannoccone* illustrates an ornamental design for a folding table with a table top formed of two boards. These two boards may be folded down or propped up in a horizontal manner to form a contiguous table top. *Iannaccone* is a folding table with the following visual design differences: 1) three short raised sections at the rear of the non-folding panel; 2) two of the raised sections having a curved design along the top; 3) a folding section of the table top that folds parallel with the legs; 4) three legs on each side, for a total of six legs; 5) two cross members along the rear side of the table; 6) a grid material that is shown at the bottom of the table when unfolded and displayed vertically when folded.

Focusing solely on the table top of *Iannaccone,* the disclosed table top design is formed of two portions, the second portion of which forms the rear of the table. This second, rear portion of the table top includes three raised wall sections, one at the rear edge and two at each side edges. The raised walls on the side edges include a curved design along the top of the wall. The *Iannaccone* reference does not disclose or suggest that the raised walls are in any way separable from the table top. Expert testimony shows that the raised walls of *Iannaccone* are a key feature of the overall design of this folding table. See *Williams Declaration* ¶75.

In contrast, nothing contained in the '012 Patent suggests or discloses anything other than a flat table top surface. The figures of the patent show disclaimed legs, controls and other mechanical items attached to the underside of the table top, but there's no suggestion of any item, feature, component, or design shown on the surface of the table top, disclaimed or otherwise. The table top design disclosed in the '012 shows a flat upper surface with no additional features on the surface of the table top, disclaimed or claimed. Thus, the claimed ornamental design of the '012 Patent is a table top with a flat, unadorned upper surface. There is simply nothing additional claimed in the '012 Patent. Given the raised walls of *Iannaccone* are an integral design feature that is not separable from the table top, the table top of *Iannaccone*, with its raised walls, provides a significantly visual impression than the flat upper surface of the table top shown in the '012 Patent. *Id*. at 76 – 77.

Further, *Iannaccone* is also a folding table with a design analysis similar to *Morgan*. The table top design in *Iannccone* includes two portions, connected by three hinges, at the central edge of the two table top portions. The two table top portions are always connected to each other in contrast to the two table top portions in the '012 Patent that can be in completely separate as seen before assembly and a complete table top after assembly. As with *Morgan*, the folding table

top of *Iannaccone*, with its two portions always attached to each other, provides a different visual impression than that of the '012 Patent. *Id.* at ¶¶ 80 – 83. The addition of tenons and holes in the amended claim of the '012 Patent provide additional clear differences in the visual impression between the '012 Patent and *Iannccone*. *Id.* at ¶84.

As with the other claimed primary references, *Iannccone* fails to operate as a primary reference in a properly applied §103 analysis. Substantial differences exist between the claimed invention embodied in the amended claim and *Iannaccone* such that they do not provide "basically the same visual impression" as each other. See *Williams Declaration* ¶¶ 79, 83 - 84.

For the same reasons outlined in relation to *Morgan*, *Carter* does not operate as a secondary reference in relation to *Iannaccone*. *Iannaccone* does not operate as a primary reference in the design patent §103 analysis and *Carter* does nothing to remedy that deficiency. The combination of *Iannaccone* and *Carter* does not render the claimed design of the amended '012 Patent obvious. *Id.* at 79, 83, 90.

F. Ground 6 – 35 USC §103 – *Iannaccone, Galant, and Carter*

The addition of *Galant* to the obviousness analysis does nothing to remedy the failure of *Iannaccone* to act as a primary reference or *Carter* to act as a secondary reference. *Id.* at 79, 83, 90, 92.

V. CONCLUSION

For the foregoing reasons, Patent Owner's motion to amend the claim of the '012 Patent should be granted.

Date: March 29, 2024

Respectfully submitted,

By: /Robert McConnell/
Robert McConnell
Lead Counsel

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(a)(vi), the undersigned hereby certifies that the foregoing PATENT OWNER'S REPLY TO PETITIONER'S OPPOSITION TO MOTION TO AMEND contains 12 pages, excluding parts of the Petition exempted under § 42.24(a)(1), as measured by the word-processing system used to prepare this paper.

Date: March 29, 2024

Respectfully submitted,

By: /Robert McConnell/
Robert McConnell
Lead Counsel

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§ 42.6(e) and 42.105(a), the undersigned certifies that on March 29, 2024, a copy of the foregoing PATENT OWNER'S REPLY TO PETITIONER'S OPPOSITION TO MOTION TO AMEND were served by email on Lead Counsel for Petitioner at the email address listed below:

P Andrew Riley (Reg. No. 66,290)
ariley@meimark.com
MEI & MARK LLP
818 18th Street NW, Suite 410 Washington, DC 20006
Tel: 888-860-5678
Fax: 888-706-1173

Date: March 29, 2024

Respectfully submitted,

By: /Robert McConnell/
Robert McConnell
Lead Counsel