UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Hangzhou Taihe Trading Co., Ltd. & Ningbo Likeju Trading Co., Ltd.
Petitioner

v.

EP Family Corp.
Patent Owner

Design Patent No. D934,012
Case No. 2023-0658

PETITIONERS' OPPOSITION TO PATENT OWNER'S NON-CONTINGENT MOTION TO AMEND

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LIST OF EXHIBITS

Exhibit	Description
Ex. 1001	U.S. Design Patent No. D934,012 to Chang ("the '012 patent")
Ex. 1002	Declaration of Expert Witness Paul Hatch ("Hatch")
Ex. 1003	Resume and Prior Testimony of Paul Hatch
Ex. 1004	U.S Patent No. 476,400 to Morgan et al. ("*Morgan*")
Ex. 1005	Spanish Industrial Design No. I146513 to Muebles Bordonabe, S.A. ("*Bordonabe Furniture*")
Ex. 1006	U.S. Design Patent No. D424,325 to Iannacone ("*Iannaccone*")
Ex. 1007	Ikea, *Table Galant - $149.00 / pieces* ("*Galant*")
Ex. 1008	Affidavit of Nathaniel E. Frank-White
Ex. 1009	Complaint, Dkt. 1 in *EP Family Corp. v. Changzhou Win Up Time Tech. Co*, Case No. 2:22-cv-08192 (C.D. Cal.)
Ex. 1010	Amazon product page for accused product, ASIN# B09JSBL7LH
Ex. 1011	Supplemental Declaration of Paul Hatch ("Hatch Suppl.")
Ex. 1012	U.S. Patent No. 543,609 to Carter ("*Carter*")
Ex. 1013	EVANS BROS. LONDON, JOINTS IN WOODWORK (3d ed. 1920)
Ex. 1014	United States Patent No. 666,435 to Oliver ("*Oliver*")
Ex. 1015	United States Patent No. 1,766,694 to Siskin ("*Siskin*")

I. Introduction

Patent Owner's Motion to Amend (Paper 11) ("MTA") proposes to amend the claim of the '012 patent by modifying Figures 1, 6, 8, 9, and 14 to remove the disclaimer of four holes and tenons. MTA at 6-7. Patent Owner has confirmed that its MTA is non-contingent. Paper 12 at 2. Therefore, Patent Owner requests cancellation of the '012 patent's original claim, which Petitioners do not oppose.

Petitioners oppose the addition of Patent Owner's substitute claim, however, for several reasons. The substitute claim does not comply with 37 C.F.R. § 42.121 because it fails to address the grounds of unpatentability. The substitute claim is also indefinite and, in any event, obvious over prior art.

II. The Substitute Claim Does Not Comply with 37 C.F.R. § 42.121

"Before considering the patentability of any substitute claims, . . . the Board first must determine whether the motion to amend meets the statutory and regulatory requirements set forth in 35 U.S.C. § 316(d) and 37 C.F.R. § 42.121." *Lectrosonics, Inc. v. Zaxcom, Inc.*, Case IPR2018-01129, Paper 15 at 4 (P.T.A.B. Feb. 25, 2019) (precedential). The MTA does not meet these requirements because the substitute claim fails to respond to the grounds of unpatentability.

The substitute claim removes the disclaimer of "a total of four holes" and "a total of four tenons" from Figures 1, 6, 8, 9, and 14. Patent Owner argues that these "amendments address each ground of unpatentability argued in the Petition and

Institution decision by adding claim elements that are not found in any of the cited prior art." MTA at 13. Patent Owner is wrong.

Design patents only cover novel ornamental, non-functional aspects of a patented design. *See, e.g.*, *Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665, 680 (Fed. Cir. 2008). General features that "are functional [are] not protectable." *OddzOn Prods, Inc. v. Just Toys, Inc.*, 122 F.3d 1396, 1404 (Fed. Cir. 1997). Patent Owner's mere addition of "claim elements that are not found in any of the cited prior art" (MTA at 13) is insufficient to establish that the substitute claim addresses the grounds of unpatentability because Patent Owner fails to even allege, let alone establish that the added claim elements are ornamental rather than functional in nature. The MTA contains no evidence or argument regarding the ornamentality of the added holes and tenons and Patent Owner cannot introduce such evidence for the first time on reply. *See, e.g.*, *Neuroderm Ltd. v. Abbvie Inc.*, Case PGR2022-00040, Paper 77 at 24 n. 10 (P.T.A.B. Oct. 31, 2023) (declining to consider declarations submitted with a reply "to carry its burden of meeting the regulatory and statutory requirements for a motion to amend").

Regardless, the added holes and tenons are purely functional in nature. Hatch Suppl. at ¶¶22-35. Holes and projections, such as dowels or tenons, are used to add stability between two neighboring pieces of material, including parts of a tabletop. *Id* at ¶ 23. As JOINTS IN WOODWORK 84 (3d ed. 1920) explains, the

purpose of circular tenons or dowels "is to guide the table leaf into its proper position when the leaf engages with the table proper, and to make the flat surface of the table top and leaf register correctly and thus ensure a level surface." Exhibit 1013 at 97. Inserting a dowel/tenon into a hole prevents the tenon from moving in a direction perpendicular to the axis of the tenon relative to the hole. This helps not only with stability, but in the case of a tabletop, assists with alignment. Hatch Suppl. at ¶ 27. Holes and tenons are typically placed equidistant from the table surface to ensure that the tabletop pieces stay even (i.e., one board is not proud of (higher than) the other). The functional use of holes and dowels/tenons in tabletops has been known and in use for hundreds of years. JOINTS IN WOODWORK, published in 1920, shows this because it provides a detailed description of the purpose of, and how to make and use, dowels over one-hundred years ago. *Siskin*, issued in 1930, also uses dowels 31 and dowel holes to allow two "boards" to be "drawn together . . . into engagement, thus forming a table with a large table top." *Siskin* at 2:96-101. By 1901, joining two planks using dowels/tenons was already regarded as "usual." *Oliver* at 1:64-67; Hatch Suppl. at ¶¶ 28-29.

Furthermore, as shown in Figure 23 of the '012 patent, the tenons and holes are not even visible when the table is "in an environment of use." That is the case because the tabletop is a single piece, with both planks connected, when used as a tabletop. The tenons/holes are not even visible at all. This further confirms that the

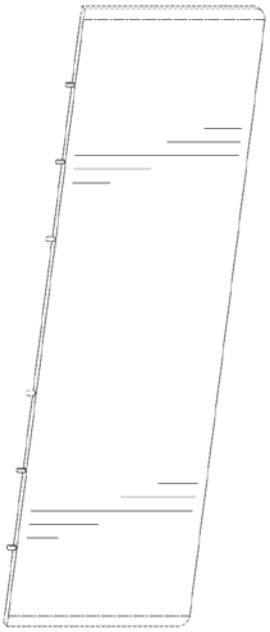
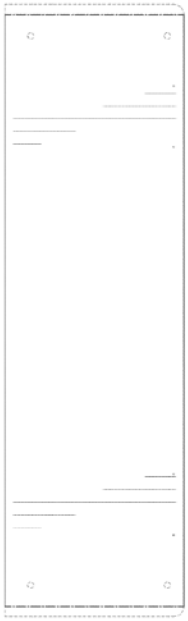
added tenons/holes in the substitute claim are purely functional in nature, not ornamental, because they are entirely hidden from view. Their purpose is to provide stability, not to provide any ornamentality. Hatch Suppl. at ¶¶ 34-35.

Thus, because the tenons and holes added to the substitute claim are purely functional in nature, they are not protectable. *Egyptian Goddess*, 543 F.3d at 680. Accordingly, Patent Owner's addition of functional holes and tenons to its claimed design fails to address the grounds of unpatentability.

III. The Proposed Substitute Claim Is Indefinite

The scope of a design patent "is 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). "A visual disclosure may be inadequate—and its associated claim indefinite—if it includes multiple, internally inconsistent drawings." *Id.* at 1375. Here, the substitute claim results in multiple inconsistent drawings, from which an ordinary observer would not be able to ascertain the scope of the claim. Hatch Suppl. at ¶¶ 36-41.

The MTA proposes to amend Fig. 8 to add tenons. Yet Figs. 2 and 3, both of which show the same "top portion" of the tabletop as Fig. 8, do not show the added tenons. This is readily apparent from the table below comparing amended Figure 8 to Figures 2 and 3, which remain unamended.

MTA Fig. 8	Fig. 2	Fig 3.
		

More problematic, the ’012 patent description states that Fig. 1 “is a perspective view of a top portion of a tabletop” and Fig. 8 “is another perspective view thereof shown in an environment of use.” ’012 patent at description. In other words, Figs. 1 and 8 both show the *same* top portion. Yet the MTA amends Fig. 8 to add tenons and does not amend Fig. 1. The same problem affects Figs. 4 and 5, which are left and right-side views in which the added tenons should be visible.

In view of these differences, a person of ordinary skill would not be able to discern whether the claimed design includes the added tenons. Hatch Suppl. at ¶ 40; *see Maatita* 900 F.3d at 1375-76. After amendment, the visual disclosure includes internally inconsistent drawings because one view (Fig. 8) shows the

tenons while other views omit them. These tenons are allegedly material aspects of the claimed design because Patent Owner asserts that they are sufficient to render the claims patentable over the prior art. Because a person of ordinary skill in the art would have no way of knowing from the visual disclosure whether the claimed design requires tenons, the amended claim is indefinite and therefore unpatentable.

IV. The Proposed Substitute Claim Is Unpatentable Over Prior Art

A. Prior Art & Grounds

Petitioner relies on the prior art references identified in the petition, including *Morgan* (Ex. 1004), *Bordonabe Furniture* (Ex. 1005), *Iannaccone* (Ex. 1006), and *Galant* (Ex. 1007). Petition at 5. Patent Owner does not dispute the prior art status of these references. Petitioner further relies on U.S. Patent No. 543,609 ("*Carter*") (Ex. 1012). *Carter* was patented in 1895 and thus qualifies as prior art under 35 U.S.C. § 102(a)(1).

The substitute claim is unpatentable based on the grounds identified in the table below under 35 U.S.C. § 103. As noted in the petition, Petitioner proposes alternative constructions for the width of the two boards/planks that make up the claimed tabletop: the first based on the Patent Owner's anticipated construction in which the claimed design encompasses boards with equal widths and the second in which the boards cannot have equal widths. Petition at 13-16.

Ground	Grounds of Unpatentability	Claim Construction
1	*Carter* and *Morgan* render obvious the substitute claim under 35 U.S.C. § 103.	Patent Owner's Equal-Width
2	*Carter*, *Galant*, and *Morgan* render obvious the substitute claim under 35 U.S.C. § 103.	Patent Owner's Equal-Width
3	*Carter* and *Bordonabe Furniture* render obvious the substitute claim under 35 U.S.C. § 103.	Both Constructions
4	*Carter*, *Galant*, and *Bordonabe Furniture* render obvious the substitute claim under 35 U.S.C. § 103.	Both Constructions
5	*Carter* and *Iannaccone* render obvious the substitute claim under 35 U.S.C. § 103.	Both Constructions
6	*Carter*, *Galant*, and *Iannaccone* render obvious the substitute claim under 35 U.S.C. § 103.	Both Constructions

B. Claim Construction

As explained in the Petition, the grounds rely on alternative constructions for the width of the boards/planks. Petition at 13-16. Under the first construction, Patent Owner's equal-width construction, the claim is construed to encompass tabletops wherein the boards/planks can have equal widths (although equal-widths are not required). Under the second construction, the claim covers *only* tabletops where the boards/planks have unequal widths with an off-center seam.

In its institution decision, the Board declined to construe the claims, finding that "a verbal construction is not necessary to describe the overall ornamental nature of the '012 design." Institution Decision 8 at 13. Nonetheless, the Board

indicated that the figures "clearly depict a table top having two rectangular portions/planks having *different* widths." *Id.* (emphasis added); *see also* Institution Decision at 45 (explaining that the visible seam is formed off-center).

Despite this, Patent Owner expressly asserts that the claim covers tabletops with equal-width boards/planks, resulting in a seam in the middle of the table. Patent Owner unambiguously states that "the widths of the top and bottom portions *are not limited to unequal embodiments as shown in the drawings*." MTA at 4 (emphasis added). Patent Owner "submit[s] that the top and bottom portions are not construed as the 'wider portion' and the 'narrower portion' of the table top respectively on page 4 of the Decision Granting Institution." *Id.*

Because Patent Owner expressly (though wrongly) argues that the claim covers tables with two equal-width boards, Petitioner continues to present grounds based on Patent Owner's (previously anticipated, now actual) construction.

C. Grounds Presented in Petition

Each of the above grounds (1-6) relies on *Carter* in combination with prior art presented in the Petition. *Compare* Petition at 5-6 (grounds 2-3, 5-6, and 8-9) *with* grounds 1-6 above. The Petition explains why the original, unamended claim, is unpatentable over *Morgan*, *Bordonabe Furniture*, *Iannaccone*, and *Galant*.

In its MTA, Patent Owner includes sections titled "Response to Institution" that purport to "continue[] and maintain[] the arguments contained in [its]

Preliminary Response." MTA, Paper 11 at 16, 19, 23-24. However, Patent Owner may not "incorporate[] by reference [arguments] from one document into another document." 37 C.F.R. § 42.6(a)(3). Patent Owner was expressly "cautioned that any arguments not raised in the [patent owner] response may be deemed waived." Scheduling Order, Paper 9 at 9. Preliminary response arguments that are not re-raised post institution are waived. *See, e.g., G&H Diversified Mfg., LP v. Dynaenergetics Eur. GMBH*, PGR2021-00078, Paper 44 at 31 (P.T.A.B. Oct. 28, 2022) ("Patent Owner has waived the arguments . . . found only in the Preliminary Response"); *Apple Inc. v. Uniloc 2017 LLC*, IPR2019-00701, Paper 17 at 15 n.14 (P.T.A.B. Aug. 17, 2020) ("We decline to consider whatever Patent Owner considers is 'incorporated' from its Preliminary Response . . ."). Therefore, the Board should disregard Patent Owner's express incorporation of arguments.

D. The Substitute Claim Is Unpatentable

To the extent the Board finds (1) the substitute claim is not indefinite and requires the added tenons/dowels[1] (Section III) and (2) that tenons/dowels are not purely functional in nature (Section II), the substitute claim is nonetheless

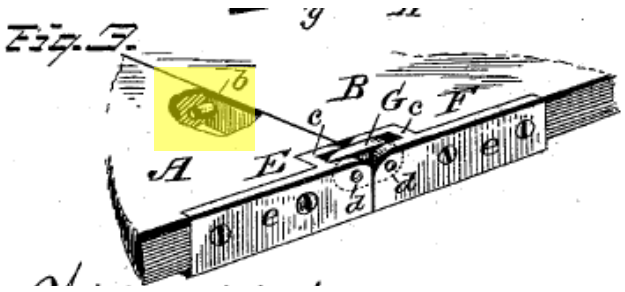
[1] As explained above, it is not clear from the figures if tenons/dowels are required because they do not appear where they would be expected in all the figures. This section assumes tenons/dowels are required despite the inconsistent figures.

unpatentable. Using tenons/dowels to join tabletops was well known long before the ’012 patent. *Carter* discloses using tenons/dowels to join tabletop planks as early as the 19th century. Moreover, a person of ordinary skill in the art would have been motivated to use dowels/tenons to join tabletop pieces and would have had a reasonable expectation of success in doing so.

1. *Carter* discloses using tenons/dowels to join tabletop planks

Carter, patented in the 19th century, discloses using tenons/dowels to join tabletop planks. *Carter* at 1. Carter discloses a “folding table” where the top is formed “in two hinged sections.” *Carter* at 1:12-19.

Carter explains that the tabletop may be of any shape and may be “round, square, octagonal, or any other shape found most preferable.” *Id.* at 1:33-37. *Carter* further discloses the use of “dowel-pins b” to “form a close joint when the contacting edges of the [tabletop] sections A [and] B come together.” *Id.* at 1:41-50. *Carter* explains that the dowel pins help to “form a close joint” and also help to “support[] the inner edges of the sections when in an extended position.” *Id.* An example of dowel pin b is shown in Fig. 3 of *Carter*, which is reproduced below with a yellow highlight identifying dowel pin b.



2. Reasons to combine *Carter*

A designer of ordinary skill in the art would have found it obvious to use tenons/dowels to help align and join two neighboring planks in a tabletop in view of *Carter*. Hatch Suppl. at ¶¶ 42-53. Tenons/dowels have long been used to help align planks that are intended to form a tabletop. *Carter* explains the purpose of dowel pins is to help "form a close joint" and also allow neighboring planks to support each other. *Carter* at 1:41-50. Indeed, this technology is so old that it was already detailed in guides over 100 years ago, as in JOINTS IN WOODWORK. Ex. 1013 at 97. Using dowels/tenons to connect tabletop pieces was so well known by the early 20th century that *Oliver*, which issued in 1901, refers to it as connecting planks "by means of the *usual* dowel pins." *Oliver* at 1:64-67 (emphasis added).

A designer of ordinary skill at the time of the '012 patent—4 years ago, in 2019—would have been familiar with this ancient and rudimentary technology. An ordinary designer would have known that dowels/tenons—or indeed, protrusions of any shape—help to align and stabilize neighboring boards/planks to ensure a flat, continuous surface when the planks are joined together. Hatch Suppl. at ¶ 27 (explaining that pins are placed equidistant from the surface to ensure the surface is flat). A designer would have also understood that dowels/tenons are typically spaced along the length of the jointing surface so that planks are aligned and supported along the entire length. Hatch Suppl. at ¶ 50 (rationale for spacing).

With this background of ancient techniques in mind, a designer of ordinary skill would have been motivated to use dowels/tenons to join neighboring planks in a tabletop. *Id.* at ¶¶ 43-53. Doing so would have beneficially and predictably ensured that the tabletops have a smooth surface such that one plank is not proud of another (i.e., one tabletop does not sit higher than the other). Doing so would have also predictably provided stability by ensuring that the tabletop planks are joined together to form a single piece. A designer of ordinary skill would have also known that using dowels/tenons was one of several old options for joining planks together (others included tongue and groove (or other complementary shapes), staples/fasteners, or simply glue) and at a minimum was obvious to try. *Id.* at ¶ 49.

A designer of ordinary skill would have also been motivated to select a reasonable number of dowels/tenons to add, with a minimum of two and a maximum that depends on the length of the overall table. *Id.* at ¶¶ 50-52. Using between four and ten dowels would make sense for a typical tabletop. *Id*. Spacing dowels/tenons along the length of the plank predictably ensures that any point along the length of the plank is relatively close to a nearby dowel. *Id*. This helps ensure the planks remain lined up and the table surface remains smooth/continuous along the entire length of the table. *Id*. at ¶ 53. (explaining wood movement). For example, JOINTS IN WOODWORK recommends spacing dowel pins 9-10 inches apart with two dowel pins on the ends. Ex. 1013 at 81-82. A designer of ordinary skill

would have found it obvious to select a reasonable number of dowel pins, between 4-10 for a typical tabletop, and such a selection would have led to predictable results (e.g., added complexity but more stability with greater number of dowels). Hatch Suppl. at ¶ 51 (explaining tradeoffs).

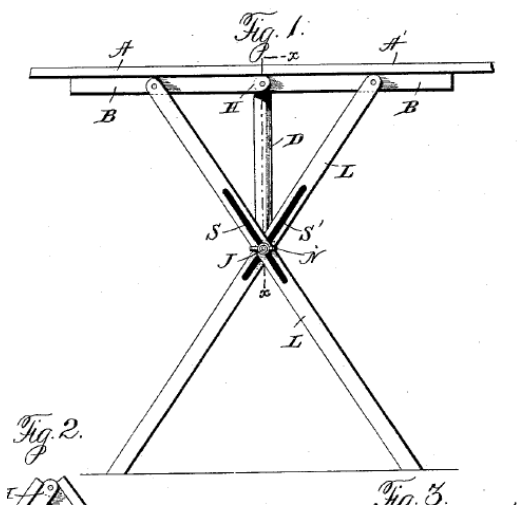
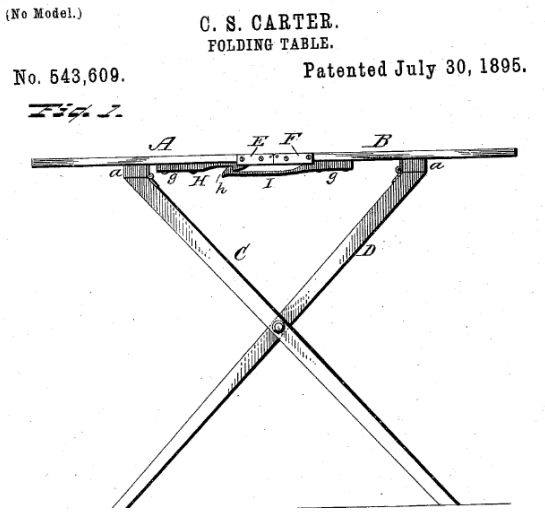
Adding dowels/tenons would have led to predictable results. *Id* at ¶ 53. There is nothing unpredictable about adding a hole in one plank and a protrusion (tenon/dowel) in the other plank to ensure that the two line up with each other. There is also nothing unpredictable about the fact that a protrusion or a series of protrusions will add to the stability of two boards because the protrusions will ensure that the boards do not move relative to one another, unless of course the protrusion somehow breaks. *Id*. These are trivially simple results that flow from using dowels/tenons. Moreover, even if there was some doubt that using dowels/tenons would lead to predictable results, *Carter* and JOINTS IN WOODWORK remove all such doubt because they explicitly predict and explain the effect of using such dowels/tenons. *Carter* at 1:41-50 (form a close joint and provide support); Ex. 1013 at 97 (ensure a level surface).

3. Ground 1: *Carter* and *Morgan* render obvious the substitute claim under 35 U.S.C. § 103

The substitute claim is unpatentable over *Carter* and *Morgan* under Patent Owner's construction, which encompasses equal-width boards. Hatch Suppl. at ¶¶ 56-65. *Morgan* is a suitable primary reference that creates basically the same

visual impression as the claimed design, for the reasons explained in the Petition. Petition at 27. The addition of the holes/tenons to the substitute claim does not alter this conclusion because the overall visual impression created by the substitute claim remains the same: that of two planks abutted against each other. Hatch Suppl. at ¶ 57. The added holes/tenons are not a substantial difference or major modification that changes the overall appearance of the substitute claim such that *Morgan* would no longer create the same visual impression as the substitute claim in the same way it created the same visual impression as the unamended claim.

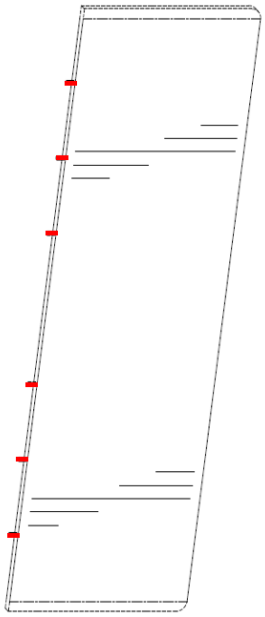
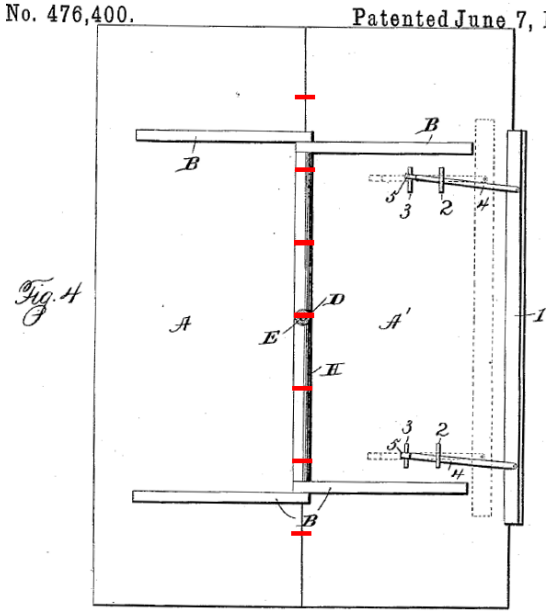
Carter is a suitable secondary reference because it is so related to *Morgan* that the appearance of features in *Carter* would suggest the application of those features to *Morgan*. Both *Carter* and *Morgan* relate to tables and their tabletops, and both relate to a folding table. Their folding tabletops are very similar, having similar X-shaped legs when unfolded and having a tabletop formed from two equal-width planks. Indeed, as shown in the side-by-side comparison below, the *Morgan* and *Carter* folding tables are very similar both visually and in their structural design. Hatch Suppl. at ¶ 60.

Morgan	Carter
	

A designer of ordinary skill would have found it obvious and been motivated to use tenons/dowels to help align and join two neighboring planks in a tabletop in view of *Carter* for the reasons explained above in Section IV.D.2. And a designer of ordinary skill would have met with predictable results in adding such tenons/dowels (along with their corresponding holes) to *Morgan*. Section IV.D.2.

The resulting tabletop would have dowels spaced along one tabletop plank and corresponding holes spaced along the other plank to allow the planks to be joined together with a smooth surface. As explained above in Section IV.D.2, a designer of ordinary skill would have found it obvious and predictable to select a reasonable number of dowel pins between four and ten for a typical tabletop. With seven dowel pins used to join the tabletop planks, the resulting tabletop of *Morgan*, as modified by *Carter*, would result in a design that has the same overall visual

appearance as the substitute claim. Hatch Suppl. at ¶ 62. As shown below in the side-by-side comparison between substitute Fig. 8 and *Morgan*—with annotated, red boxes showing dowels—the dowels/tenons in the combination would have the same visual impression as that of the substitute claim.

Substitute Figure 8	***Morgan* Figure 4**
	

While the seven added dowels in the *Morgan/Carter* combination are greater in number than the four claimed in substitute Fig. 8, they nonetheless create the same visual impression as the substitute claim. Hatch Suppl. at ¶¶ 63-64. This is so because substitute Fig. 8 permits two additional unclaimed dowels/tenons, with spacing like that of the claimed dowels. Moreover, there is space in the substitute claim for an additional dowel/tenon at the center of the table, which would result in seven equally-spaced dowels. An ordinary observer, viewing the *Morgan/Carter*

combination would have regarded the combination as creating the same overall visual impression as that of the substitute claim: i.e., that of two boards/planks abutted against each other with two tenons close to each end. *Id*. Although the combination includes additional tenons that are absent (or unclaimed) in the substitute claim, an ordinary observer would have regarded this as only a slight difference in design that does not detract from the overall visual similarity. *Id*. This is especially the case where the tenons/dowels are not even visible during the ordinary use of the tables as they are hidden from view. *Id*.

Accordingly, because the *Morgan*/*Carter* tabletop creates the same overall visual appearance as the substitute claim, including the two equal-width planks under Patent Owner's now actual construction and because it includes the dowel/tenons, the substitute claim is unpatentable. *Id.* at ¶ 65.

4. Ground 2: *Carter*, *Galant*, and *Morgan* render obvious the substitute claim under 35 U.S.C. § 103

The substitute claim is unpatentable over *Carter*, *Galant*, and *Morgan* under Patent Owner's construction, which encompasses equal-width boards. Hatch Suppl. at ¶¶ 66-67. As explained above, *Carter* and *Morgan* render obvious the substitute claim. To the extent Patent Owner argues that the overall proportions (length/width) of the tabletop matters, Petitioner submits that the claimed design is obvious without adding an additional reference. A mere variation of the tabletop size is not patentable because it is entirely functional in nature. *Monoflo Intern.*,

Inc. v. Larand Intern., Inc., 5 F.3d 1505 (Fed. Cir. 1993) (nonprecedential); *Door-Master Corp. v. Yorktowne, Inc.*, 256 F.3d 1308, 1312 (Fed. Cir. 2001).

Nonetheless, *Galant* renders obvious a tabletop with proportions identical to the claimed design for the reasons identified in the Petition. Petition at 29-32.

5. Ground 3: *Carter* and *Bordonabe Furniture* render obvious the substitute claim under 35 U.S.C. § 103

The substitute claim is unpatentable over *Carter* and *Bordonabe Furniture*, under either construction. Hatch Suppl. at ¶¶ 68-78.

Bordonabe Furniture is a suitable primary reference that creates basically the same visual impression as the claimed design, for the reasons explained in the Petition. Petition at 32-33 (design A, equal width), 34-35 (design B, unequal width). The addition of the holes/tenons to the substitute claim does not alter this conclusion because the overall visual impression created by the substitute claim remains the same: that of two planks abutted against each other. The added holes/tenons are not a substantial difference or major modification that changes the overall appearance of the substitute claim such that *Bordonabe Furniture* would no longer create the same visual impression as the substitute claim in the same way it created the same visual impression as the unamended claim. Hatch Suppl. at ¶ 69.

Carter is a suitable secondary reference because it is so related to *Bordonabe Furniture* that the appearance of features in *Carter* would suggest the application of those features to *Bordonabe Furniture*. This is because both

references relate to tables and tabletops and, in particular, tabletops formed from two neighboring boards/planks abutted against each other. *Id*. at ¶¶ 72. Finally, a designer of ordinary skill would have understood the teachings of *Carter* to apply to *Bordonabe Furniture* because using dowels/tenons to join two boards/planks was well-known, ancient technology, as evidenced by JOINTS IN WOODWORK and *Oliver*. *See* Ex. 1013 at 97; *Oliver* at 1:64-67 ("usual dowel pins").

A designer of ordinary skill would have found it obvious and been motivated to use tenons/dowels to help align and join two neighboring planks in a tabletop for the reasons explained above in Section IV.D.2. And a designer of ordinary skill would have met with predictable results in adding such tenons/dowels (along with their corresponding holes) to *Bordonabe Furniture*. Section IV.D.2.

The resulting tabletop would have dowels spaced along one tabletop plank and corresponding holes spaced along the other plank to allow the planks to be joined together with a smooth surface. Hatch Suppl. at ¶ 74. As explained above in Section IV.D.2, a designer of ordinary skill would have found it obvious and predictable to select a reasonable number of dowel pins between four and ten for a typical tabletop. With seven dowel pins used to join the tabletop planks, the resulting tabletop of *Bordonabe Furniture*, as modified by *Carter*, would create a design that has the same overall visual appearance as the substitute claim.

While the seven added dowels in the *Bordonabe Furniture/Carter* combination are greater in number than the four claimed in substitute Fig. 8, they nonetheless create the same visual impression as the substitute claim. Hatch Suppl. at ¶¶ 76-77. This is because substitute Fig. 8 includes two additional unclaimed dowels/tenons, with spacing like that of the claimed dowels. Moreover, there is space in the substitute claim for an additional dowel/tenon at the center of the table, which would result in seven equally-spaced dowels. An ordinary observer, viewing the *Bordonabe Furniture/Carter* combination would have regarded the combination as creating the same overall visual impression as that of the substitute claim: i.e., that of two boards/planks abutted against each other with two tenons close to each end. *Id*. Although the combination includes additional tenons that are absent (or unclaimed) in the substitute claim, an ordinary observer would have regarded this as only a slight difference in design that does not detract from the overall visual similarity. This is especially so where the tenons/dowels are not even visible during the ordinary use of the tables as they are hidden from view. *Id*.

Accordingly, because the *Bordonabe/Carter* tabletop creates the same overall visual appearance as the claimed design, including (1) the two equal-width planks under Patent Owner's now actual construction along with the dowel/tenons (*Bordonabe Furniture* Design A) and (2) the two unequal-width planks under

Petitioner's construction along with the dowel/tenons (*Bordonabe Furniture* Design B), the substitute claim is unpatentable. Hatch Suppl. at ¶ 78.

6. Ground 4: *Carter, Galant,* and *Bordonabe Furniture* render obvious the substitute claim under 35 U.S.C. § 103

The substitute claim is unpatentable over *Carter*, *Galant*, and *Bordonabe Furniture* under either construction. Hatch Suppl. at ¶¶ 79-80.

As explained in the previous section, *Carter* and *Bordonabe Furniture* render obvious the substitute claim. To the extent the overall proportions (length/width) of the tabletop matters, the claimed design is obvious without adding an additional reference. *Monoflo*, 5 F.3d 1505; *Door-Master*, 256 F.3d at 1312. Nonetheless, *Galant* renders obvious a tabletop with proportions identical to the claimed design for the reasons identified in the Petition. Petition at 41-45.

7. Ground 5: *Carter* and *Iannaccone* render obvious the substitute claim under 35 U.S.C. § 103

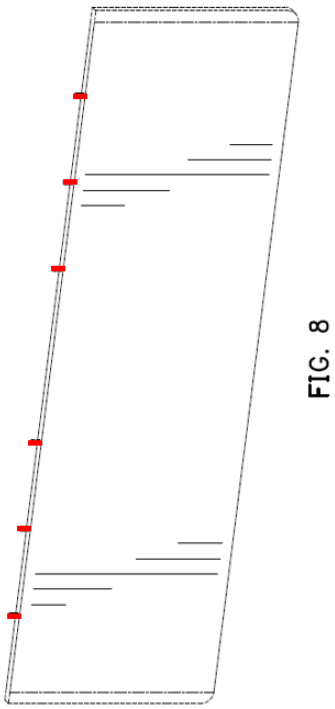
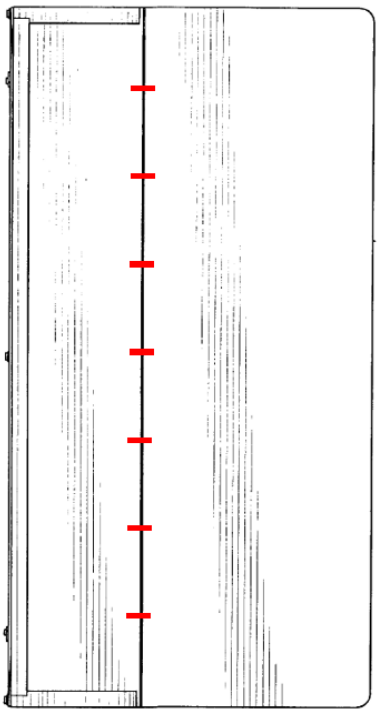
The substitute claim is unpatentable over *Carter* and *Iannaccone* under either construction, both of which encompass unequal-width boards. Hatch Suppl. at ¶¶ 81-90. *Iannaccone* is a suitable primary reference that creates basically the same visual impression as the claimed design, for the reasons explained in the Petition. Petition at 48-51. The addition of the holes/tenons to the substitute claim does not alter this conclusion because the overall visual impression created by the substitute claim remains the same: that of two planks abutted against each other.

The added holes/tenons are not a substantial difference or major modification that changes the overall appearance of the substitute claim such that *Iannaccone* would no longer create the same visual impression as the substitute claim in the same way it created the same visual impression as the unamended claim.

Carter is a suitable secondary reference because it is so related to *Iannaccone* that the appearance of features in *Carter* would suggest the application of those features to *Iannaccone*. Both references relate to tables and their tabletops, and both relate to a folding table. Moreover, both folding tabletops use two boards/planks abutted against each other to form the resulting larger tabletop surface. Hatch Suppl. at ¶ 85. Additionally, a designer of ordinary skill would have understood the teachings of *Carter* to apply to *Iannaccone* because using dowels/tenons to join two boards/planks was well-known, ancient technology, as evidenced by JOINTS IN WOODWORK and *Oliver*. *See* Ex. 1013 at 97; *Oliver* at 1:64-67 ("usual dowel pins").

A designer of ordinary skill would have found it obvious and been motivated to use tenons/dowels to help align and join two neighboring planks in a tabletop in view of *Carter* for the reasons explained above in Section IV.D.2. And a designer of ordinary skill would have had predictable results in adding such tenons/dowels (along with their corresponding holes) to *Iannaccone*. Section IV.D.2.

The resulting tabletop would have dowels spaced along one plank and corresponding holes spaced along the other plank to allow them to be joined together with a smooth surface. Hatch Suppl. at ¶ 87. As explained in Section IV.D.2, a designer of ordinary skill would have found it obvious and predictable to select a reasonable number of dowel pins between four and ten for a typical tabletop. With seven dowel pins, the resulting tabletop of *Iannaccone*, as modified by *Carter*, would create a design that has the same overall visual appearance as the substitute claim. As shown in the comparison below between substitute Fig. 8 and *Iannaccone*—with annotated, red boxes showing dowels—the combination would create the same visual impression as the substitute claim. Hatch Suppl. at ¶ 87.

Substitute Figure 8	***Iannaccone* Figure 5**
 FIG. 8	 FIG. 5

While the seven added dowels in the *Iannaccone/Carter* combination are greater in number than the four claimed in substitute Fig. 8, they nonetheless create the same visual impression as the substitute claim. Hatch Suppl. at ¶¶88-89. This is so because substitute Fig. 8 includes two additional unclaimed dowels/tenons, with spacing like that of the claimed dowels. Moreover, there is space in the substitute claim for an additional dowel/tenon at the center of the table, which would result in seven equally-spaced dowels. An ordinary observer, viewing the *Iannaccone/Carter* combination would have regarded the combination as creating the same overall visual impression as that of the substitute claim: i.e., that of two boards/planks abutted against each other with two tenons close to each end. *Id*. Although the combination includes additional tenons that are absent (or unclaimed) in the substitute claim, an ordinary observer would have regarded this as only a slight difference in design that does not detract from the overall visual similarity. *Id*. This is especially the case where the tenons/dowels are not even visible during the ordinary use of the tables as they are hidden from view. *Id*.

Accordingly, the substitute claim is unpatentable because the *Iannaccone/Carter* tabletop creates the same overall visual appearance as the claimed design, including the two unequal-width planks under Petitioner's construction and the dowel/tenons. Hatch Suppl. at ¶ 90.

8. Ground 6: *Carter, Galant,* and *Iannaccone* render obvious the substitute claim under 35 U.S.C. § 103

The substitute claim is unpatentable over *Carter*, *Galant*, and *Iannaccone* under either construction. Hatch Suppl. at ¶¶ 91-92.

As explained in the previous section, *Carter* and *Iannaccone* render obvious the substitute claim. To the extent Patent Owner argues that the overall proportions (length/width) of the tabletop matters, the claimed design is obvious without adding an additional reference. A mere variation of the tabletop size is not patentable because it is entirely functional in nature. *Monoflo*, 5 F.3d 1505; *Door-Master*, 256 F.3d at 1312.

Nonetheless, *Galant* renders obvious a tabletop with overall proportions identical to the claimed design for the reasons identified in the Petition. Petition at 52-55 (rationale for combining *Galant* with *Iannaccone*).

V. Conclusion

For these reasons, Patent Owner's Motion to Amend should be denied as to the proposed substitute claim.

Date: February 16, 2024

Respectfully submitted,

By: /P. Andrew Riley/
P Andrew Riley
Lead Counsel

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§ 42.6(e) and 42.105(a), the undersigned certifies that on February 16,2024, a copy of the foregoing **PETITIONERS' OPPOSITION TO PATENT OWNER'S NON-CONTINGENT MOTION TO AMEND** and **EXHIBITS 1011-1015** were served by electronic mail on Patent Owner at the following addresses:

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Date: February 16, 2024

Respectfully submitted,

By: /P. Andrew Riley/
P Andrew Riley
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