

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

Declaration of Expert Witness Robert Williams

TABLE OF CONTENTS

I. INTRODUCTION	3
II. QUALIFICATIONS AND EXPERIENCE.....	4
III. PROCEDURAL BACKGROUND	6
IV. PROPOSED AMENDMENTS.....	6
V. PETITIONER’S GROUNDS FOR UNPATENTABILITY	13
A. The proposed amendments are not purely functional.	13
B. The proposed amendments are not indefinite.	22
C. The proposed amendments are patentable over the cited prior art.	23
VI. CONCLUSION	38

1. I, Robert Williams, declare as follows:

I. INTRODUCTION

2. I have been retained by Patent Owners EP Family Corp as an independent expert to investigate and opine on certain issues related to U.S. Design Patent D934,012 (“the ‘012 Patent”) in connection with the Petition for Inter Partes Review before the Patent Trial and Appeal Board of the United States Patent and Trademark Office.

3. I understand that in this proceeding, Petitioner Hangzhou Taihe Trading Co., Ltd. & Ningbo Likeju Trading Co., Ltd (“Petitioner”) argues that the claim of the ‘012 Patent is unpatentable over the references cited in their Petition. Further, in response to the Patent Owner’s motion to amend the claim of the ‘012 Patent, Petitioner has made arguments in opposition to that amendment.

4. This declaration, including the accompanying exhibits, sets forth my opinions, conclusions, and other matters regarding Petitioner’s Opposition to Patent Owner’s Motion to Amend.

5. I have been provided with the case materials in this matter and understand that my task is to review those materials and offer my expert opinions regarding this matter. I have also reviewed references relevant to the subject matter of this case in the process of forming and providing my opinion. My opinions are based on review of the following documents:

Document	Exhibit Number (if assigned)
US Design Patent D934,012	
<i>Morgan</i>	Ex. 1004
<i>Bordonabe Furniture</i> and translation to English	Ex. 1005, Ex. 2001

<i>Iannaccone</i>	Ex. 1004
<i>Galant</i>	Ex. 1007
<i>Carter</i>	Ex. 1012
Patent Owner's Motion to Amend	
Petitioner's Opposition to Patent Owners Non-Contingent Motion to Amend	
Supplemental Declaration of Paul Hatch	Ex. 1011
Woodwork Joints	Ex. 1013
US Patent No. 666,435 to <i>Oliver</i>	Ex. 1014
US Patent No. 1,766,694 to <i>Siskin</i>	Ex. 1015

6. In addition to the information contained in the documents above, I relied on my own education, training, experience, and knowledge in forming the opinions contained in this declaration. I reserve the right to supplement this Declaration as additional materials become available to me.

7. I am being compensated at the rate of \$400 per hour for providing analysis and deposition testimony in this proceeding. My compensation is not contingent on the outcome of any matter or the specifics of my testimony. I have no financial interest in the outcome of this matter.

II. QUALIFICATIONS AND EXPERIENCE

8. A copy of my curriculum vitae, which provides a complete list of my education, experience, and publications that are relevant to the subject matter of this report, is attached as Exhibit 2007.

9. I possess the knowledge, skills, experience, training, and education to form an expert opinion and provide expert testimony in this matter. I have over 36 years of experience in furniture design and construction. I pursued a Bachelors of Science in philosophy and ancient Koine Greek at Word Of Life Bible Institute, Schoon Lake, NY (1985-1986), Oakland Community College, Auburn, MI (1989) and (MBI) Moody Bible Institute Chicago, IL (1987-1990).

10. I am currently the Vice President of Design and Merchandising for The Habersham Plantation Corporation. I held this role from 2002 – 2016 and again from 2022 to present. In this role, I have created original and innovative designs of high-quality, luxury furniture and cabinet products for the kitchen and home. I have designed the following types of furniture items: armoires, bookcases, credenzas, desks, libraries, home office furniture, kitchen cabinets/fixtures, vanities, closets, beds, nightstands, chests, dressers, mirrors, home theater furniture, stools, benches, mechanical lift systems, automated doors, dining chairs, lighting, and home decor accessories. I have been actively involved in all phases of the design, manufacturing, merchandising, and sales process including all phases of design (from concept to first production run), market research, sketching, computer aided design (2D & 3D), prototyping, auditing and qualifying production facilities in China, Indonesia, Philippines, Vietnam, India and Mexico. I have also hired, built and trained design teams, managed design teams, both domestic and international, supported marketing efforts, and provided sales product training to national sales representatives. I have designed many types of tables including dining tables, foyer tables, coffee tables, end tables, console tables, contact office tables, table desks, pedestal tables, and leg table truss tables. I am familiar with the various construction techniques for tables and joining table tops.

11. I have managed teams of furniture designers. In those roles I have become skilled in the art of furniture design and construction, including the ornamental and functional elements of such designs. My experience allows me to understand how a designer of ordinary skill in the art would perceive a furniture, table or table top design. My experience also allows me to understand how a designer of ordinary skill in the art would make functional and ornamental choices in furniture design.

12. I've designed licensed collections from the William Randolph Hearst Castle, Biltmore Estate, Plaza Hotel, and Claude Monet Estate, through the Versailles Foundation of France.

13. My designs have been published in Architectural Digest, Robb Report, House Beautiful, Veranda, Dwell, Affluent, Traditional Home, and Capitol File.

14. I hold copyrights on many of my designs, including various elements of tables.

III. PROCEDURAL BACKGROUND

15. I understand that in response to the Decision granting Institution of *Inter Partes* Review in this proceeding, Patent Owner has moved to amend the claim of the '012 Patent. I will outline those amendments, as I understand them, below.

16. I further understand that the Petitioner has opposed amendment of the claim by arguing that: 1) amendments are purely functional, 2) the amendments are indefinite, and 3) the amendments would be obvious to one of ordinary skill in the art, and thus not patentable, based on a combination of references cited by the Petitioner.

IV. PROPOSED AMENDMENTS

17. I understand that design patents have a single claim and that claimed material is shown in the figures included in the patent document. The single claim of the '012 Patent, as issued, reads

“The ornamental design for a table top, as shown and described.” The 23 figures of the ‘012 Patent show the claimed invention.

18. The figures of a design patent may include material that is part of the claimed invention and material that is disclaimed and not part of the claimed invention. The ‘012 Patent, as issued, includes the following disclaimer:

The broken line portions of the table top in FIGS. 1 – 23 represent portions of the article that form no part of the claim. The broken lines of the tenons in FIG. 8 illustrate environment that form no part of the claimed design. The broken lines of the bases in FIG. 23 illustrate environment that form no part of the claimed design. The dot-dash broken lines in FIGS. 1 – 3, 8 – 11, 16 – 18 and 23 represent boundary lines and form no part of the claimed design.

19. I understand that the single claim, the 23 figures of the ‘012 Patent and the included disclaimer set the scope of the claimed invention in the ‘012 Patent.

20. The Patent Owner has moved to amend the claim of the ‘012 Patent by amending Figs 1, 6, 8, 9 and 14. The proposed changes to each figure are:

Figure 1: Removal of disclaimer of a total of four holes by amending the outline of the four holes from broken lines to solid lines. Two of the holes are located closest to the right side edge of the table top and two of the holes are located closest to the left side outer edge of the table top.

Figure 6: Removal of disclaimer of a total of four holes by amending the outline of the four holes from broken lines to solid lines. Two of the holes are located closest to the right side edge of the table top and two of the holes are located closest to the left side outer edge of the tabletop.

Figure 8: Removal of disclaimer of a total of four tenons by amending the outline of the four tenons from broken lines to solid lines. Two of the tenons are located closest to the

right side outer edge of the table top and two of the tenons are located closest to the left side outer edge of the table top.

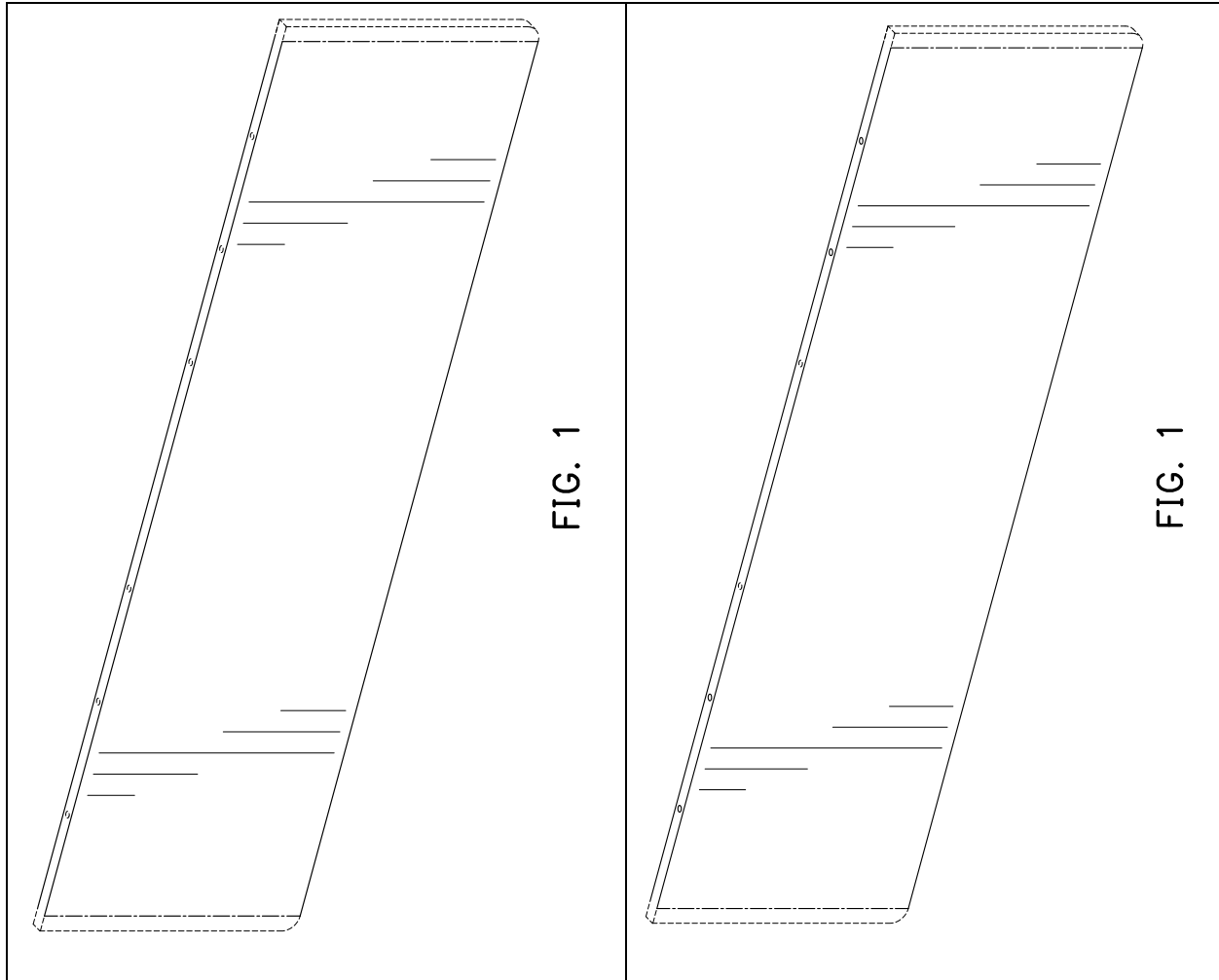
Figure 9: Removal of disclaimer of a total of four holes by amending the outline of the four holes from broken lines to solid lines. Two of the holes are located closest to the right side outer edge of the table top and two of the holes are located closest to the left side outer edge of the table top.

Figure 14: Removal of disclaimer of a total of four holes by amending the outline of the four holes from broken lines to solid lines. Two of the holes are located closest to the right side outer edge of the tabletop and two of the holes are located closest to the left side outer edge of the table top.

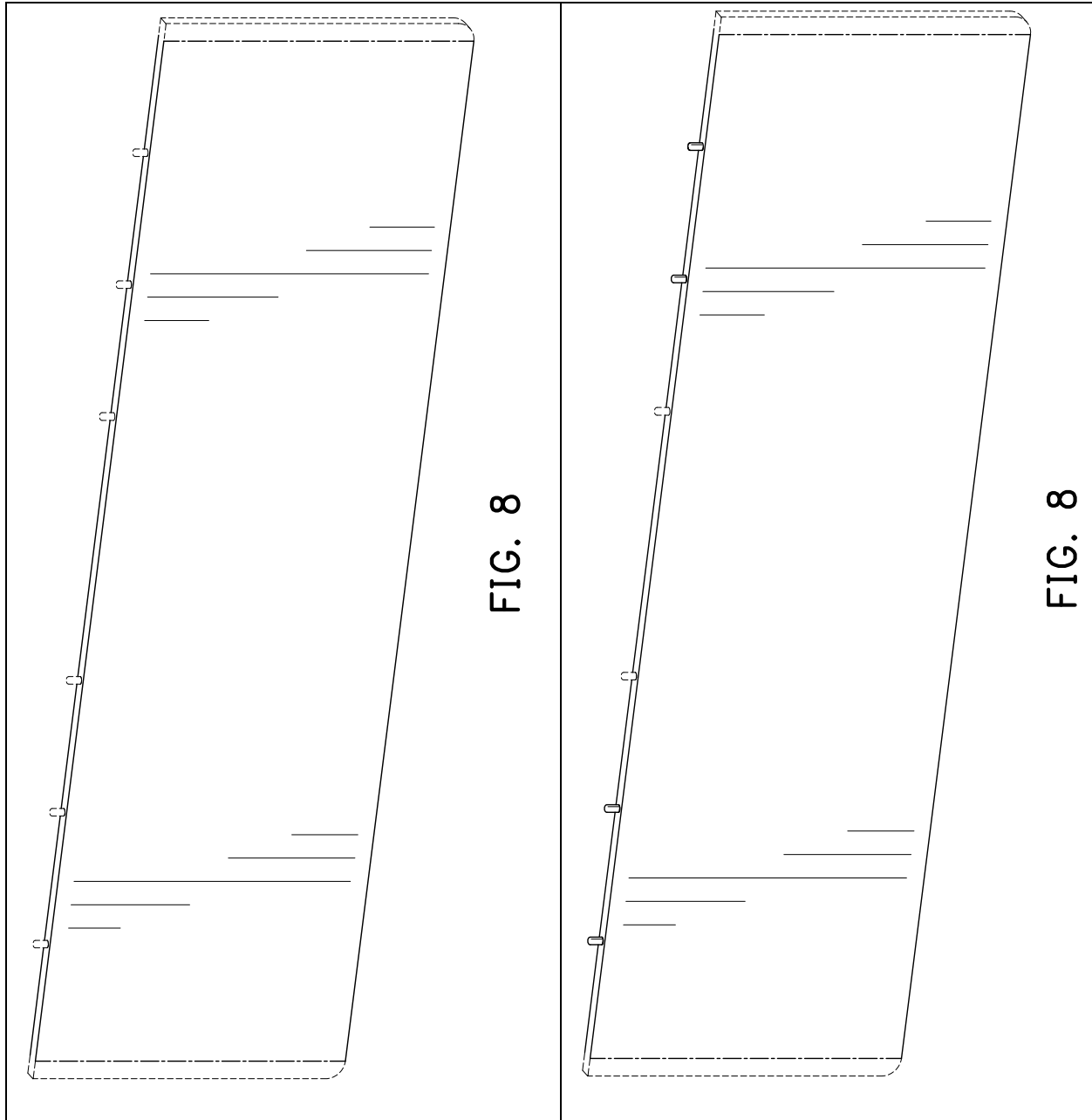
21. Patent Owner proposed no amendments to Figs 2 – 5, 7, 10 – 13, 15 – 23.

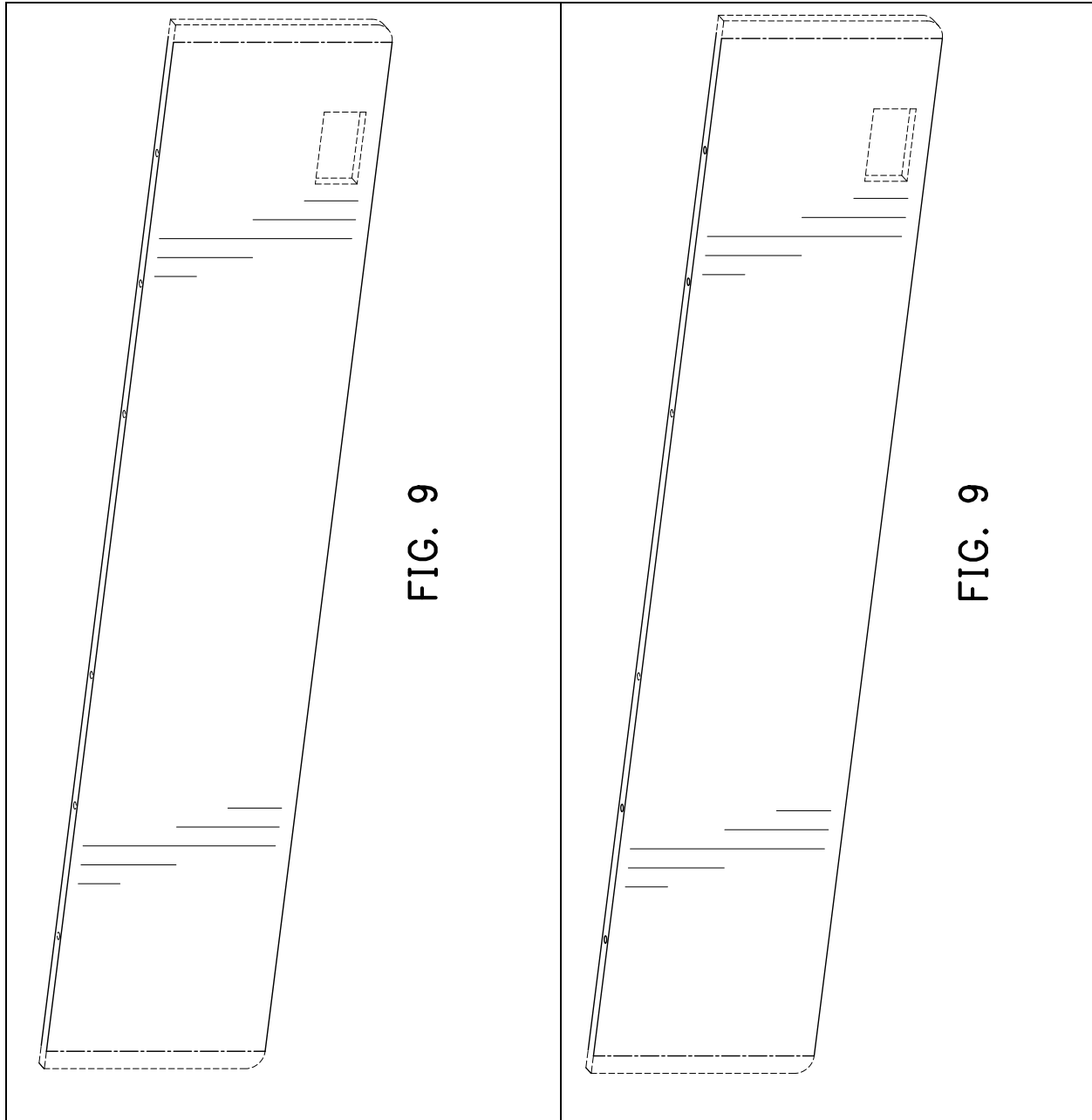
22. The original and proposed amended figures are:

Original Figure	Proposed Amended Figure
-----------------	-------------------------











V. PETITIONER'S GROUNDS FOR UNPATENTABILITY

A. The proposed amendments are not purely functional.

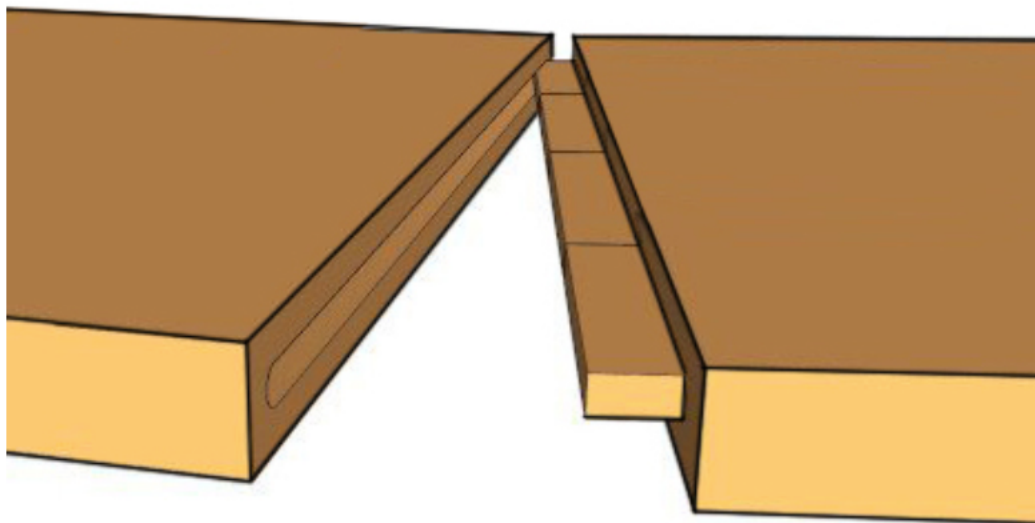
23. In their Opposition to Patent Owner's Non-Contingent Motion to Amend, the Petitioner argues that the proposed claim amendments are purely functional in nature and thus not protectable by a design patent.

24. There are many well-known methods of aligning, joining and providing stability between two boards in furniture construction. Board in this context means any substantially planar component utilized in the construction of many furniture types. Furniture types that include two boards joined using these methods include cabinets, shelving, chests of drawers and as is relevant to this declaration, tables. The methods outlined below are commonly utilized to join two table top portions.

25. The **Blind Mortise and Tenon Joint** is a classic woodworking joint that is strong and versatile. It consists of a hole (mortise) cut into one piece of wood and a protruding tongue (tenon) on the other piece that fits into the hole. This joint is used in a variety of applications, including frame construction, furniture making, and door and window construction. *See* Albert Jackson, David Day, and Simon Jennings, *The Complete Manual of Woodworking*, 226 – 232 (1989) (Ex. 2008), *Fine Woodworking on Joinery*, 9 – 17 (1985) (Ex. 2009), James Krenov, *The Impractical Cabinetmaker* 19, 106, 125 (1993) (Ex. 2010), 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/> (Ex. 2011).

26. I have personally used a Blind Mortise and Tenon Joint to join two boards together on the same plane thus forming a flush, even surface. Based on my training, experience and expertise, a Blind Mortise and Tenon Joint would be an appropriate method to join two table top portions.

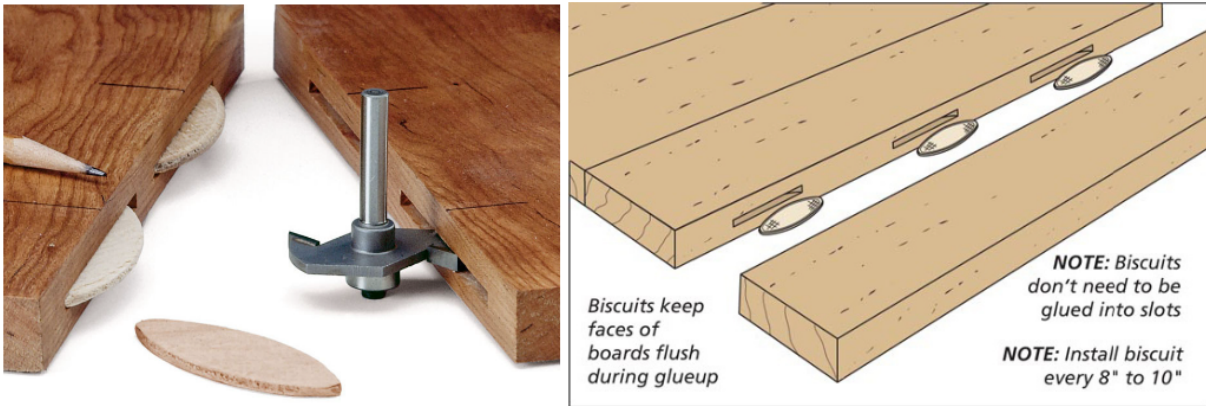
27. I have provided an illustration of a Blind Mortise and Tenon Joint that comports with my knowledge and understanding of the joint below.



28. The **Biscuit Joint** is a quick and easy method for aligning and joining two pieces of wood. It involves cutting matching slots in the two pieces of wood and inserting a thin, oval-shaped "biscuit" made of compressed wood fibers and glue into the slots. When the glue dries, the biscuit expands, creating a strong bond between the two pieces. See *The Complete Manual of Woodworking* at 136 – 137.

29. I have personally used a Biscuit Joint to join two boards together on the same plane thus forming a flush, even surface. Based on my training, experience and expertise, a Biscuit Joint would be an appropriate method to join two table top portions.

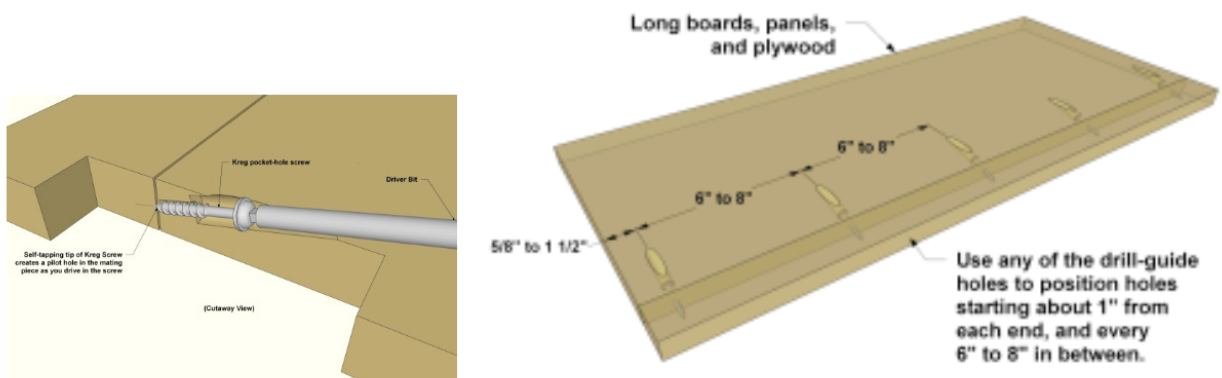
30. I have provided an illustration of a Biscuit Joint that comports with my knowledge and understanding of the joint below.



31. The **Pocket Hole Joint** is a fast and simple method for joining two pieces of wood at an angle. It involves drilling a hole at an angle into one piece of wood and then using a special jig to drill a matching hole in the other piece. A screw is then inserted into the angled hole, pulling the two pieces of wood together. See Gary Rogowski, *The Complete Illustrated Guide to Joinery*, 42, 197, 201 (2002) (Ex. 2012).

32. I have personally used a Pocket Hole Joint to join two boards together on the same plane thus forming a flush, even surface. Based on my training, experience and expertise, a Pocket Hole Joint would be an appropriate method to join two table top portions.

33. I have provided an illustration of a Pocket Hole Joint that comports with my knowledge and understanding of the joint below.



34. The **Tongue and Groove Joint** is made by cutting a groove (slot) in one piece of wood and a matching tongue (protrusion) on the other piece. When the two pieces are fitted together, the tongue fits snugly into the groove, creating a strong, flush joint. This joint is often used in flooring, paneling, furniture, and other applications where a tight, seamless fit is desired. See *The Complete Manual of Woodworking* at 146, 223.

35. I have personally used a Tongue and Groove Joint to join two boards together on the same plane thus forming a flush, even surface. Based on my training, experience and expertise, a Tongue and Groove Joint would be an appropriate method to join two table top portions.

36. I have provided an illustration of a Tongue and Groove Joint that comports with my knowledge and understanding of the joint below.



37. A **Beadlock Joint** is a type of joinery system that uses a cylindrical tenon with opposing wedges to create a strong, secure joint. The joint is made by drilling matching holes in the two pieces of wood that are being joined. A cylindrical tenon, called a bead, is inserted into the holes, and then opposing wedges are driven into slots in the tenon, expanding it and locking it into place. This creates a strong, mechanical connection that is similar to a traditional mortise and tenon joint but can be created using a simple drilling jig. Beadlock Joints are commonly used in woodworking for joining two table top portions. Other applications for a Beadlock Joint include

attaching table legs to rails, attaching face frames to cabinets, and other applications where a strong, durable joint is required. See Rockler, *Beadlock® Tenon Stock* (Last accessed March 26, 2024) <https://www.rockler.com/beadlockreg-tenon-stock> (Ex. 2013).

38. I have personally used a Beadlock Joint to join two boards together on the same plane thus forming a flush, even surface. Based on my training, experience and expertise, a Beadlock Joint would be an appropriate method to join two table top portions. Based on my knowledge, Beadlock Joints were in use well before 2019, the filing date of the '012 Patent.

39. I have provided an illustration of a Beadlock Joint that comports with my knowledge and understanding of the joint below.



40. A **Clamex P-14 Detachable Furniture Connector** for woodworking is a type of fastener used to join two pieces of wood together, typically in furniture construction, including joining two table top portions. It consists of two parts: a cam lock and a cam screw. The cam lock is inserted into a hole drilled into one of the pieces of wood, while the cam screw is inserted into a corresponding hole in the other piece of wood. When the cam screw is turned, the cam lock is drawn tight against the second piece of wood, creating a strong, secure joint. Blind cam locks are called so because they are installed from one side of the joint, making them ideal for situations

where the joint will not be visible once assembled. They are commonly used in flat-pack furniture and other applications where quick and easy assembly and disassembly are required.

See *Lamello Catalogue 2015/2016*, 18 (2015) (Ex. 2014).

41. I have personally used a Clamex P-14 Detachable Furniture Connector to join two boards together on the same plane thus forming a flush, even surface. Based on my training, experience and expertise, a Clamex P-14 Detachable Furniture Connector would be an appropriate method to join two table top portions.

42. I have provided an illustration of a Clamex P-14 Detachable Furniture Connector that comports with my knowledge and understanding of the joint below.

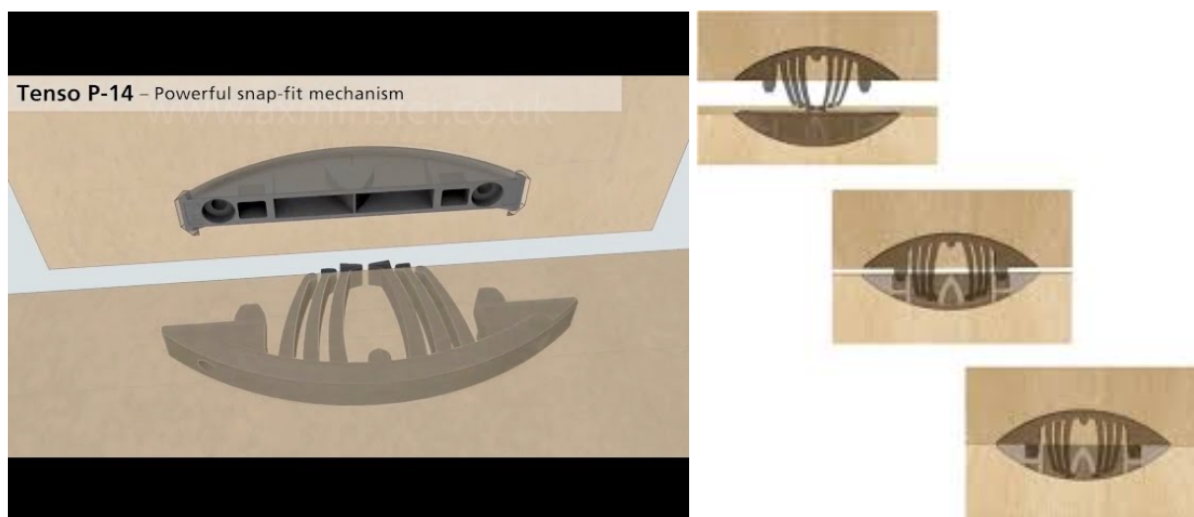


43. The **Tenso P-14 Detachable Furniture Connector** is a concealed furniture connector system designed for assembling furniture without the need for visible screws or fittings. It consists of two main components: the connector and the pre-inserted expanding element. The connector is typically installed in a routed groove in one piece of wood, while the expanding element is inserted into a corresponding hole in the other piece. When the two pieces are pushed together, the expanding element expands, creating a secure connection between the two pieces.

The Tenso P-14 is known for its ease of use and ability to create strong, invisible joints, making it popular in modern furniture design. See *Lamello Catalogue 2015/2016* at 22.

44. I have personally used a Tenso P-14 Detachable Furniture Connector to join two boards together on the same plane thus forming a flush, even surface. Based on my training, experience and expertise, a Tenso P-14 Detachable Furniture Connector would be an appropriate method to join two table top portions.

45. I have provided an illustration of a Tenso P-14 Detachable Furniture Connector that comports with my knowledge and understanding of the joint below.



46. Based on these well-known methods of joining two table top portions, it is my opinion that a designer of ordinary skill in the art may choose from any one of them to provide stability between two table top portions.

47. In my experience, there are many aesthetic reasons why a furniture designer of ordinary skill in the art choose tenons and holes as a method to join two table top portions including:

1. **Historical or Traditional Design:** A skilled artisan may choose certain tenon and hole designs to replicate or evoke historical or traditional furniture styles. For example, they might choose a particular tenon shape or hole pattern commonly found in a specific historical period.
2. **Visual Balance, Symmetry, and Harmony:** The selection of tenon size, shape, and hole pattern can greatly influence the visual balance, symmetry, and harmony of the overall design. A skilled artisan might choose these elements to create a pleasing visual composition that complements the rest of the table.
3. **Material and Construction Considerations:** While primarily aesthetic, the choice of tenon and hole design may also take into account the material and construction methods used. For example, a certain tenon size or shape might be chosen for its compatibility with the wood species or the tools and techniques available.
4. **Brand Identity or Design Language:** In the context of a furniture manufacturer, the choice of tenon and hole design can be part of a broader design language or brand identity. Certain design elements may be chosen to differentiate the product and align with the brand's aesthetic principles.
5. **Customer Preferences and Market Trends:** Skilled artisans often consider customer preferences and market trends when designing furniture. The choice of tenons and holes can be influenced by what is currently popular or desired by customers. Overall, a furniture designer skilled in the art could choose the tenon and holes in the tabletop design for a variety of aesthetic reasons that go beyond strict functional requirements.

48. In my opinion, the design embodied in the '012 Patent utilizes repetitive tenons to establish a visual effect of repetition, distinguishing it from other methods such as blind mortise

and tenon joints or tongue and groove joints. The placement of the tenons/holes on the left and right sides is symmetrical and positioned near the edges, creating a visually balanced, equilibrium effect. Based on my experience, training, and expertise, these design choices are made to provide an ornamental effect and not made purely for functional reasons.

49. I understand the relevant legal standard in this case to be that “the presence or absence of alternative designs” and “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.” Further “if other designs could produce the same or similar functional capabilities, the design of the article in question is likely ornamental, not functional.” *Automotive Body Parts Assn. v. Ford Global Technologies LLC*, 930 F.3d 1314, 1319 (Fed.Cir. 2019). Based on this statement of the relevant law, it is my opinion that the choice of a specific method from the many possible methods of joining two table top portions well known in this art would be an ornamental rather than functional choice.

B. The proposed amendments are not indefinite.

50. Petitioner argues that the proposed claim amendments are 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. This alleged indefiniteness is the result of multiple inconsistent drawings.

51. I understand Figures 1 – 8 of the ‘012 Patent relate to “a top portion of a table top.” Figures 9 – 15 relate to “a bottom portion of the table top.” Figures 16 – 23 relate to a view of the complete table top comprising a top portion and a bottom portion. See ‘012 Patent at Pg. 1, Column 2.

52. I understand that four of the six tenons displayed in Fig. 8 of the '012 Patent are now part of the amended claim of the Patent. The tenons are only shown in Fig. 8 of the '012 Patent. Fig. 8 clearly relates to the top portion of the table top.

53. The inclusion of the tenons in Fig. 8 clearly indicates that the tenons, both claimed and disclaimed, are included only in the top portion of the table top.

54. Figs. 1, 2 and 3 do not show tenons, but due to their clear inclusion in Fig. 8, which relates to the same top portion of the table top as Figs. 1, 2 and 3, it is clear that tenons are included in the top portion of the table top.

55. It is my experience that tenons are generally included in the larger portion of two table top portions. Based on my review of the figures of the '012 Patent, the top portion of the table top is the larger portion of the table top.

56. Based on my review of the amended drawings and my experience as one of at least ordinary skill in the art of furniture design, viewing the '012 Patent as an ordinary observer, it is clear to me that the tenons are included in the top portion of the table top as indicated in Figs 1 – 8.

C. The proposed amendments are patentable over the cited prior art.

57. Petitioner argues that the amended claim is unpatentable over a combination of three primary references and two secondary references.

58. I understand that the test for obviousness for design patents is outlined in *Spigen Korea Co. v. Ultraproof, Inc.*, 955 F. 3d 1379, 1383 (Fed. Cir. 2020). The test is whether the claimed design would have been obvious to a designer of ordinary skill who designs articles of the type involved. The question of fact is whether a prior art reference qualifies as a “primary reference.”

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 their overall visual appearances. 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.

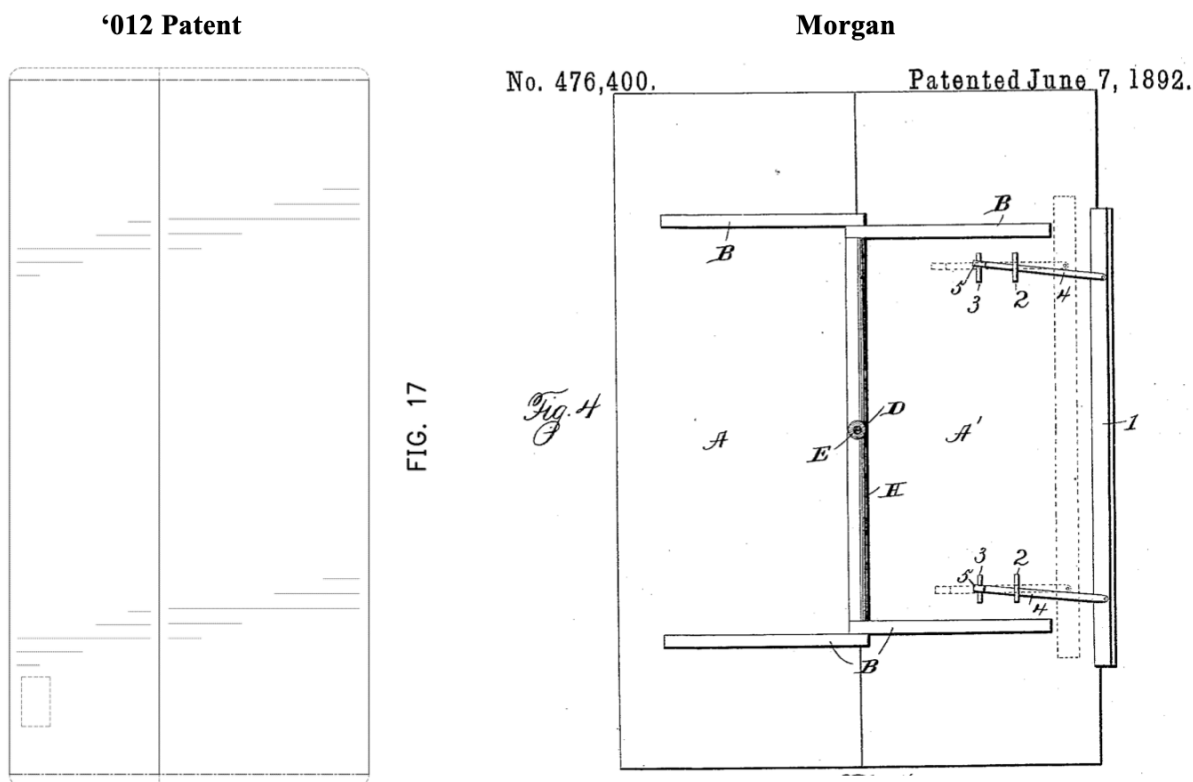
59. If a primary reference exists, it is a question of fact whether an ordinary designer would have modified the primary reference with secondary references to create a design that has the same overall visual appearance as the claimed design. A secondary reference may be used to modify a primary reference 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. I understand that these legal standards are outlined in *Campbell Soup Co. v. Gamon Plus, Inc.*, 10 F.4th 1268, 1275 (Fed. Cir. 2021) and *MRC Innovations, Inc. v. Hunter MFG., LLP*, 747 F.3d 1326, 1331 (Fed. Cir. 2014).

60. Petitioner has argued that *Morgan* (Ex. 1004), *Bordonabe Furniture* (Ex. 1005, translation to English Ex. 2001), and *Iannaccone* (Ex. 1006) are primary references. Petitioner has also argued that US Patent 543,609 to *Carter* (“*Carter*,” Ex. 1012) and *Galant* (Ex. 1007) are secondary references, and when combined with each of the Primary References, renders the amended claim of the ‘012 Patent obvious (and thus unpatentable) over the combination.

61. There are substantial differences in the design of the amended ‘012 Patent and *Morgan*. *Morgan* discloses a folding table with two leaves attached to two crossed legs which pivot about a rod attached between the two legs at their crossing point. The leaves shown in *Morgan* may be

located in a variety of positions. *Morgan's* figures also show mechanical features that are not present in any of the figures the amended '012 Patent.

62. In contrast, 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 the legs and other mechanical features of *Morgan* are clearly different from the design disclosed in the '012 Patent. The most relevant figures of the '012 Patent and *Morgan* are reproduced below:



'012 Patent

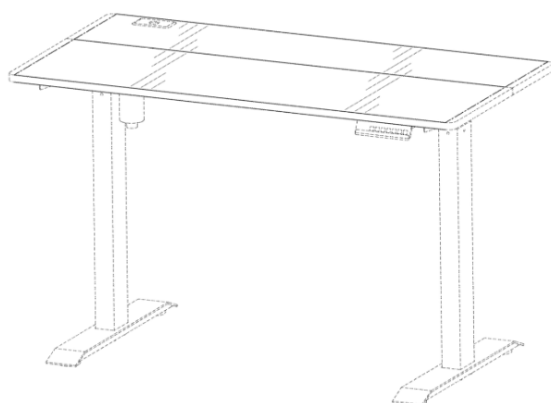
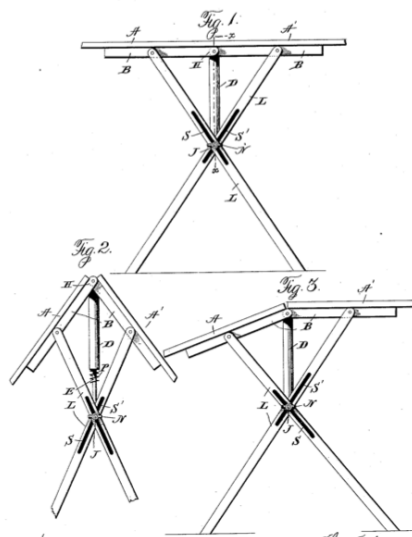


FIG. 23

Morgan

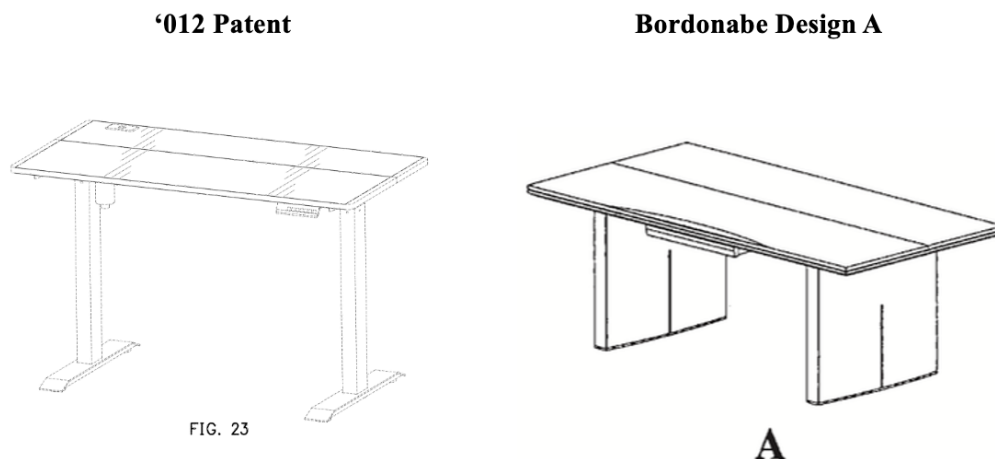


63. I understand that these differences between the '012 Patent and *Morgan* have been argued previously by the Patent Owner. These arguments are entirely consistent with my view of the '012 Patent and *Morgan* based on my training, experience, and expertise in furniture design. These clear differences prevent *Morgan* from making the same visual impression as the '012 Patent. Further, major modifications would be necessary for *Morgan* to make the same visual impression as the '012 Patent. Based on the law as explained to me, *Morgan* does not operate as a primary reference.

64. I understand that the Petitioner has argued that four designs (A, B, C, and E) in *Bordonabe Furniture* reference are primary references.

65. There are significant visual differences between *Bordonabe Furniture* A and the amended claim of the '012 Patent. *Bordonabe Furniture* A has: 1) a beveled front edge, 2) a recessed and beveled cut line between the lower and upper pieces, 3) an arched edge around the front, 4) a drawer under the workspace with an angled drawer front and 5) thick, rectangular legs that

include a vertical groove on their lower half. These differences are visible in the below comparison of relevant drawings from the '012 Patent and *Bordonabe Furniture A*:



66. The table top disclosed in the amended claim of the '012 Patent does not show any of these design features shown in *Bordonabe Furniture A*.

67. *Bordonabe Furniture Design B* is very similar to *Bordonabe Furniture Design A* in design, aside from a difference in the width of the upper and lower pieces of the table top. *Bordonabe Furniture Design B* has the following significant design features not disclosed in the '012 Patent: 1) a beveled front edge, 2) a recessed and beveled cut line between the lower and upper pieces, 3) an arched edge around the front, 4) a drawer under the workspace with an angled drawer front, and 5) thick, rectangular legs that include a vertical groove on their lower half. These differences are visible in the below comparison of relevant drawings from the '012 Patent and *Bordonabe Furniture B*:

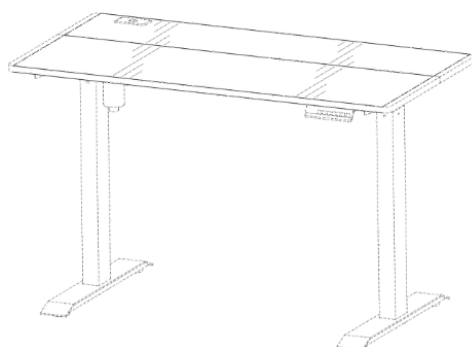
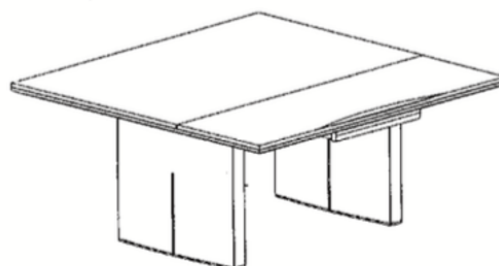
'012 Patent

FIG. 23

Bordonabe Design B**B**

68. The amended claim of the '012 Patent does not disclose any of these design features shown in *Bordonabe Furniture Design B*.

69. *Bordonabe Furniture Design C* is very similar to *Bordonabe Furniture Design A* and *Bordonabe Furniture Design B* in the design of its table top. *Bordonabe Furniture Design C* has the following significant differences in design from the amended claim of the '012 Patent: 1) a beveled front edge, 2) a recessed and beveled cut line between the lower and upper pieces, 3) an arched edge around the front, 4) a drawer under the workspace with an angled drawer front, and four cylindrical legs, each inset from the edge of the workspace. These differences are visible in the below comparison of relevant drawings from the '012 Patent and *Bordonabe Furniture C*:

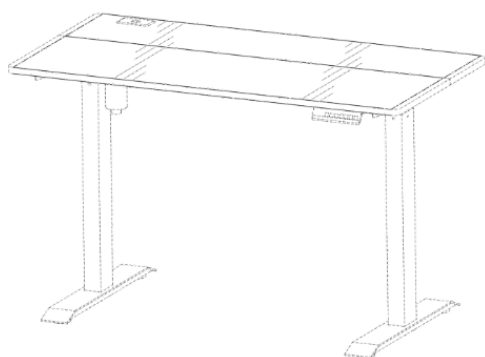
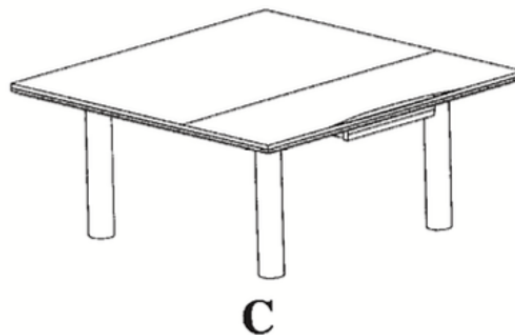
'012 Patent

FIG. 23

Bordonabe Design C**C**

70. The amended claim of the '012 Patent does not disclose any of the above design features shown in *Bordonabe Furniture Design C*.

71. *Bordonabe Furniture Design E* has the following differences in table top design from the amended claim of the '012 Patent: 1) a table top comprised of two super imposed pieces, 2) the top piece having a cut line that does not reach the edge, 3) the lower piece with a beveled edge, and 4) four cylindrical legs, each inset from the edge of the workspace. These differences are visible in the below comparison of relevant drawings from the '012 Patent and *Bordonabe Furniture E*:

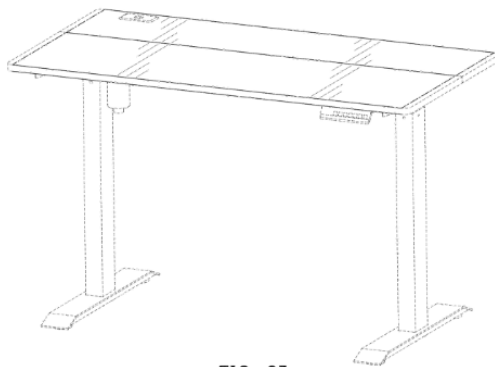
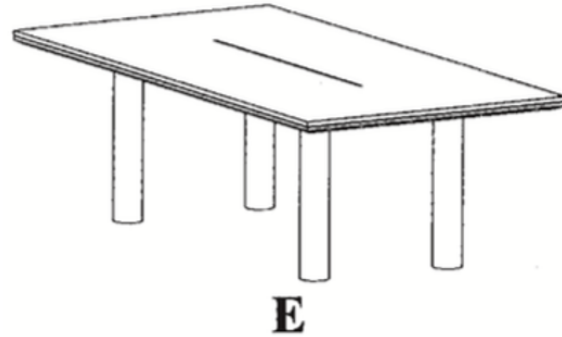
'012 Patent

FIG. 23

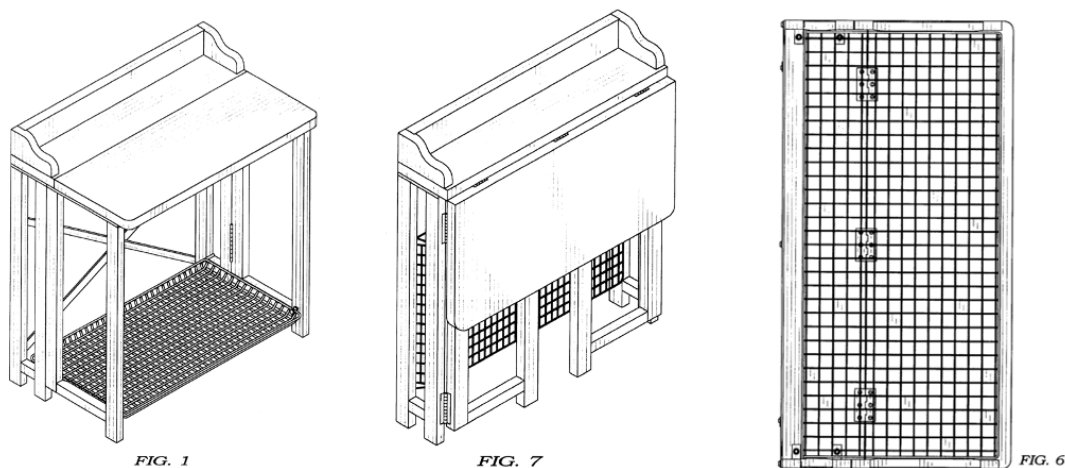
Bordonabe Design E**E**

72. The amended claim of the '012 Patent does not disclose any of the above design features shown in *Bordonabe Furniture Design E*.

73. I understand that these differences between the '012 Patent and *Bordonabe Furniture A*, *B*, *C* and *E* have been argued previously by the Patent Owner. These arguments are entirely consistent with my view of the '012 Patent and *Bordonabe Furniture A*, *B*, *C* and *E* based on my training, experience, and expertise in furniture design. These clear differences prevent the *Bordonabe Furniture* designs from making the same visual impression as the '012 Patent. Further, major modifications would be necessary for any of the *Bordonabe Furniture* designs to make the same visual impression as the '012 Patent. Based on the law as explained to me, *Bordonabe Furniture* does not operate as a primary reference.

74. I see the following substantial design differences between *Iannaccone* and the amended claim of the '012 Patent: 1) three short raised sections at the rear of the non-folding panel, 2) two of the raised sections have 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, and 5) a grid material that is shown at the bottom of the table when unfolded and displayed vertically when folded. I reviewed the below relevant figures of *Iannaccone* to assemble this list:



75. The table top depicted in *Iannaccone* includes two portions. The second portion of the table top that forms the rear of the unfolded table includes three raised wall sections, one at the rear edge and one at each of the two side edges. The raised wall sections on the side edges include a curved design along the top of the wall. I will refer to these raised wall sections of the *Iannaccone* design as the “raised walls” of *Iannaccone*. I see no suggestion in the figures or text of *Iannaccone* that the raised walls are separable from the table top. In my opinion and experience, the raised walls of *Iannaccone* are a key design feature that is not separable from the table top of *Iannaccone*.

76. The figures and disclosure of the ‘012 Patents including the proposed claim amendment only show a flat table top. While the components attached to the underside of the table top are shown as disclaimed with broken lines, there are no features shown on the actual surface of the

table top that are disclaimed. There is nothing contained in the '012 Patent that suggest that the table top is anything but a flat surface.

77. In my opinion, the raised walls of *Iannaccone* are an integral part of the table top design shown in that reference. The raised walls provide a different visual impression from the flat table top surface of the '012 Patent.

78. The amended claim of the '012 Patent does not disclose any of the above design features, specifically the raised walls, shown in *Iannaccone*.

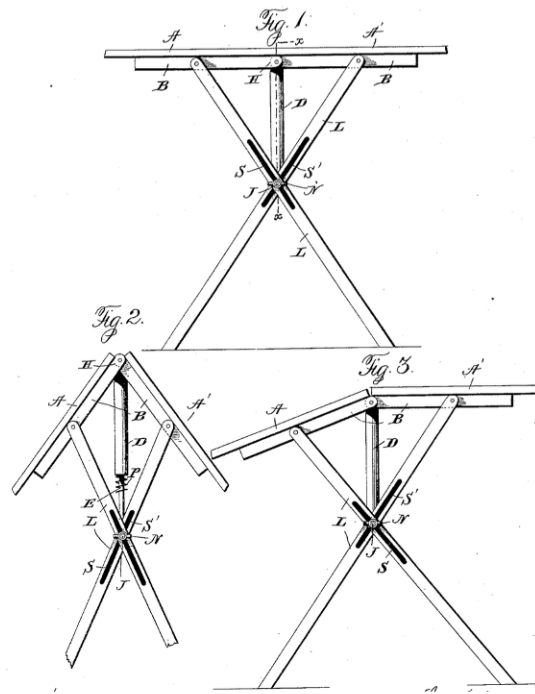
79. I understand that some of these design differences between the '012 Patent and *Iannaccone* have been argued previously by the Patent Owner. These arguments are entirely consistent with my view of the '012 Patent and *Iannaccone* based on my training, experience, and expertise in furniture design. These clear differences prevent *Iannaccone* from making the same visual impression as the '012 Patent. Further, major modifications would be necessary for *Iannaccone* to make the same visual impression as the '012 Patent. Based on the law as explained to me, *Iannaccone* does not operate as a primary reference.

80. Even analysis of the '012 Patent is limited solely to the table top, various figures show the table top in both disassembled and assembled states. Figures 1 – 8 show the top portion of the table top separate from the bottom portion of the table top depicted in Figures 9 – 15. Figures 16 – 23 show the fully assembled table top comprised of two portions. Each of these figures show claimed and disclaimed portions of the table top portion or the complete table top. At least a portion of the edges of the portion of the table top or the complete table top are claimed in the original patent as in the proposed amended claims of the '012 Patent. Three views of the table top of the '012 Patent are provided: 1) the top portion of the table top alone, 2) the bottom of the table top alone, and 3) the complete table top.

81. From my understanding, each of these views that contain claimed material, form the complete scope of the claimed invention of the '012 Patent. The visual impression provided by the '012 Patent is that of two separate table top portions and one complete assembled table top. This visual impression aligns with two separate and distinct configurations of the table top of the '012 Patent. The first configuration, seen before assembly, is that of two separate table top portions, including the now claimed tenons and holes. The second configuration, seen after assembly, is that of a complete table top. In my experience, this type of table top, with a first pre-assembly configuration and a second post-assembly configuration, is commonly used in standing desks of the type depicted in the '012 Patent.

82. In contrast, the folding tables shown in *Iannaccone* and *Morgan* have at least two different states impacting the visual impression of the table top: 1) folded and 2) unfolded/extended. Figs 1, 2 and 3 of *Morgan* clearly depict the various possible folded and unfolded or extended states of the folding table of that invention. Figs. 7 and 2 of *Iannaccone* show the unfolded/extended and folded states of the table respectively.

Morgan



Iannaccone

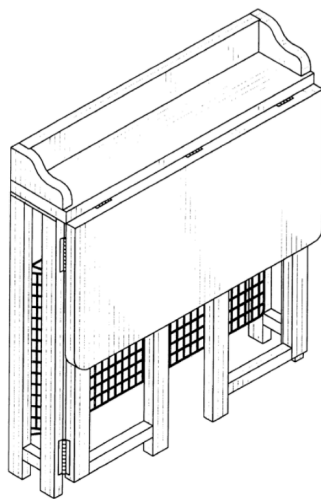


FIG. 7

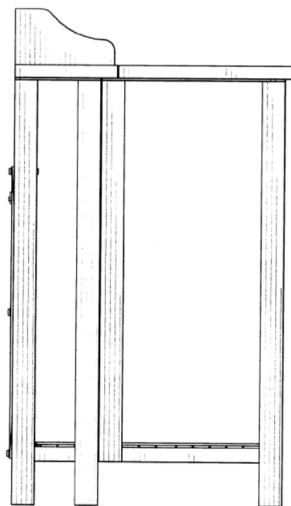


FIG. 2

83. In my opinion, the visual impression of the table top of either of the two folding tables is very different. In the folded state, the two table top portions are still attached to each other, by

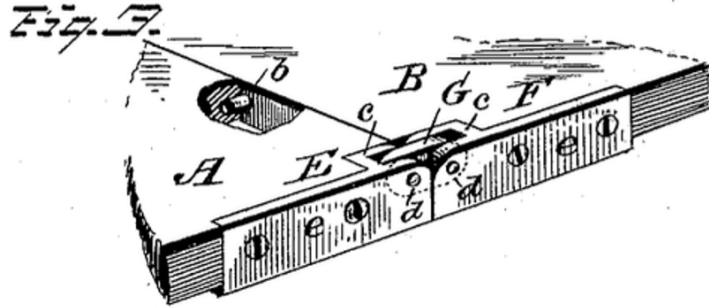
hinges, three in *Iannaccone* and two in *Morgan*. These hinges are visible in both *Morgan* and *Iannaccone*. The impression is not that of two separate unassembled table top portions but two table top portions attached at the corners of one side, by hinges. Even if the hinges are excluded from the analysis, the table top portions are still always attached to each other. Based on my experience, this provides a very different visual impression from the two separate table top portions, with tenons and holes, of the amended '012 Patent.

84. Further, now that the amended claim of the '012 Patent includes holes and tenons, the manner of connection between the two table top portions, in my opinion, is part of the visual impression of the designs. In this context, I use connection not as a functional term but to merely to describe the manner in which the two table top portions are connected. The amended claim of the '012 Patent uses four tenons and four holes for connection. Both *Iannaccone* and *Morgan* use a hinge. In my experience, a hinge provides a very different visual impression than holes and tenons. As previously outlined above, there are at least seven alternate methods of connecting two table top portions, due to the many available choices, the selection of holes and tenons is likely an ornamental decision.

85. I note that *Morgan*, *Bordonabe Furniture* and *Iannaccone* do not suggest or disclose holes and tenons as shown in the amended figures and claim of the '012 Patent.

86. Petitioner has cited *Carter* as a Secondary Reference in relation to each of their cited primary references. *Carter* is an ancient folding table reference that provides a very different visual impression from the amended '012 Patent. *Carter* discloses a single “dowel-pin b” in Fig. 3 but does not discuss, suggest or disclose a complementary hole with which the dowel-pin b may couple. In fact, the disclosure in *Carter* related to the dowel-pin b is 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.” Figure 3 shows:



87. This minimal disclosure in *Carter* shows but one dowel-pin and no holes. It does not suggest or disclose using more dowel-pins than one and does not discuss the purpose of the dowel-pins.

88. In contrast, the amended claim of the ‘012 Patent requires four tenons and four holes. As has previously been discussed, this use of tenons and holes is an ornamental choice particularly in light of the many options for joining two table top portions well known in the art and presented above. *Carter* does not suggest or disclose the use of four tenons AND four holes.

89. There are many different options that a furniture designer of ordinary skill in the art may choose to connect or join two table top portions. Some of those options and reasons a designer may be motivated to choose between them are outlined in ¶¶ 26 – 47 above. Given the many options for connection methods and minimal disclosure contained within *Carter*, it is not obvious to me that a designer would jump from the single dowel-pin (and no hole) shown in *Carter*, to the four tenons and holes required by the amended claim of the ‘012 Patent.

90. Based on the law as explained to me, *Carter* does not operate as a secondary reference to successfully modify any of the cited primary references to create a design that has the same overall visual appearance as the amended claim of the '012 Patent. *Carter's* relation to the other cited primary references as another folding table is unsuccessful as the '012 Patent is unrelated to folding tables. The combination of two related references that show a design unrelated to the claimed design does not create the same visual impression as the claimed design.

91. Again, *Morgan*, *Bordonabe Furniture* and *Iannaccone* all fail to meet the standard of a primary reference due to their substantial differences with the amended claim of the '012 Patent. Nothing is shown or disclosed in *Carter* remedies the design differences between each of those references and the amended claimed design of the '012 Patent.

92. Further, *Galant*, as table with a single piece table top including none of the features missing from the combination of *Morgan*, *Bordonabe*, *Iannaccone* with *Carter*, also does not operate as a secondary reference under the standard as I understand it. Based on my training, experience and expertise, *Galant's* narrow top gives the visual appearance of a thin console table rather than a substantial desk of the amended claim of the '012 Patent.

93. Based on my training, experience and expertise as a furniture designer of at least ordinary skill in the art, none of the following combinations:

1. *Morgan* and *Carter*;
2. *Morgan*, *Carter* and *Galant*;
3. *Bordonabe Furniture* and *Carter*;
4. *Bordonabe Furniture*, *Carter* and *Galant*;
5. *Iannaccone* and *Carter*;
6. *Iannaccone*, *Carter* and *Galant*;

Provide the same visual impression as the amended claim of the '012 Patent. Based on the obviousness standard outlined above, I do not believe a furniture designer of ordinary skill in the art would find the design of the amended claim of the '012 Patent obvious over any of the cited combinations of references.

VI. CONCLUSION

94. The four holes and tenons of the amended claim of the '012 Patent are ornamental and not purely functional in nature.

95. The amended claim of the '012 Patent is clear and not indefinite.

96. The amended claim of the '012 Patent is not obvious over the combination of *Morgan* and *Carter*.

97. The amended claim of the '012 Patent is not obvious over the combination of *Morgan*, *Carter* and *Galant*.

98. The amended claim of the '012 Patent is not obvious over the combination of any of the cited designs in *Bordonabe Furniture* and *Carter*.

99. The amended claim of the '012 Patent is not obvious over the combination of any of the cited designs in *Bordonabe Furniture*, *Carter* and *Galant*.

100. The amended claim of the '012 Patent is not obvious over the combination of *Iannaccone* and *Carter*.

101. The amended claim of the '012 Patent is not obvious over the combination of *Iannaccone*, *Carter* and *Galant*.

102. In signing this declaration, I understand that the declaration will be filed as evidence in a contested proceeding before the Patent Trial and Appeal Board of the United States

Patent and Trademark Office. I hereby acknowledge that I could be subject to cross-examination in this proceeding and that cross-examination will take place within the United States of America. If cross-examination is required of me, I will appear for cross-examination within the United States during the time allotted for cross examination.

103. I declare that all statements made herein of my knowledge are true, that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Date: March 29, 2024

By: 
Robert Williams