

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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MAN WAH HOLDINGS LIMITED,  
Petitioner,

v.

RAFFEL SYSTEMS, LLC,  
Patent Owner.

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PGR2019-00029  
Patent D821,986 S

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Before GRACE K. OBERMANN, CHRISTOPHER G. PAULRAJ, and  
RYAN H. FLAX, *Administrative Patent Judges*.

FLAX, *Administrative Patent Judge*.

JUDGMENT  
Final Written Decision  
Determining Challenged Claim Unpatentable  
35 U.S.C. § 328(a)

## I. INTRODUCTION

Raffel Systems, LLC (“Patent Owner” or “Raffel”) is the owner of U.S. Patent No. D821,986 S to Kenneth G. Seidl et al. (Ex. 1001, “the D’986 patent”). Man Wah Holdings Limited (“Petitioner” or “Man Wah”) filed a Petition requesting post-grant review of the claim of the D’986 patent. Paper 3 (“Pet.”). We instituted trial on July 10, 2019. Paper 9 (“Institution Decision”). Patent Owner filed a Response to the Petition. Paper 15 (“PO Resp.”). Petitioner responded with a Reply (Paper 20 (“Pet. Reply”)), to which Patent Owner responded with a Sur-reply (Paper 21 (“PO Sur-reply”)). A hearing was conducted on April 2, 2020, where the parties presented oral argument. *See* Paper 30 (“Hr’g Tr.”).

After considering the parties’ arguments and supporting evidence, we conclude that Petitioner has proved by a preponderance of the evidence that the claim of the D’986 patent is unpatentable. 35 U.S.C. § 326(e).

## II. BACKGROUND

### A. *REAL PARTIES-IN-INTEREST*

Petitioner states that the Real Party-in-Interest is “Man Wah Holdings Limited.” Pet. 1. Patent Owner states that the Real Party-in-Interest is “Raffel Systems, LLC.” Paper 4.

### B. *RELATED MATTERS*

Petitioner has disclosed, “[t]he ’986 patent is presently at issue in the action titled *Raffel Systems, LLC v. Man Wah Holdings LTD Inc et al.*, Case 2:18-cv-01765 (WIED).” Pet. 1. Patent Owner identifies the same related matter. *See* Paper 4.

*C. THE D'986 PATENT*

The D'986 patent is a design patent and the invention is an “ornamental design for a switch, as shown and described” in the patent. Ex. 1001, code (57) (claim). The D'986 patent indicates that it issued July 3, 2018, from US application 29/592,595, which was filed January 31, 2017. *Id.* at code (45), (21), (22). No other date for priority is indicated on the face of the D'986 patent. *Id.* Petitioner contends that January 31, 2017 is, therefore, the priority date for the D'986 patent against which prior art and patentability are measured. Pet. 3. Patent Owner agrees. PO Resp. 2.

As its claimed design (and disclosure), the D'986 patent includes six (6) drawings. The D'986 patent states:

FIG. 1 is a three-quarter perspective view showing our new design of a switch;

FIG. 2 is a front elevational view thereof, the rear elevational view being identical;

FIG. 3 is a left side elevational view thereof,

FIG. 4 is a right side elevational view thereof,

FIG. 5 is a top plan view thereof; and,

FIG. 6 is a bottom plan view thereof.

The broken lines shown in FIGS. 1 through 6 are for the purpose of illustrating environment, and form no part of the claimed design.

Ex. 1001, 1 (Description). The D'986 drawings are reproduced below:

The D'986 patent's Figure 1 is reproduced immediately below.

FIG. 1

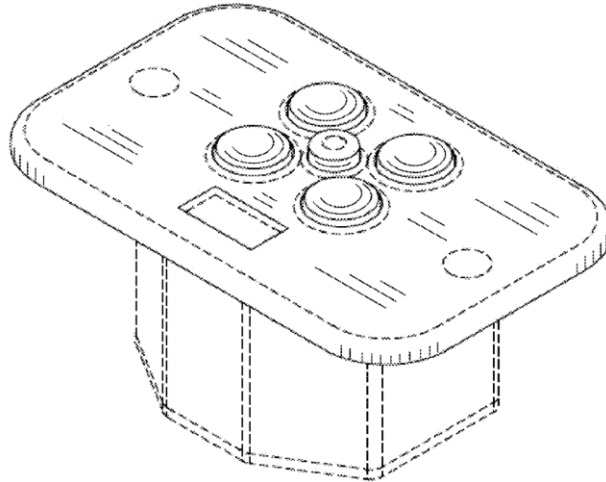


Figure 1, above, shows a perspective view of the claimed switch design from above, looking over one rounded corner. Ex. 1001, Fig. 1, code (57). The D'986 patent's Figure 5 is reproduced immediately below.

FIG. 5

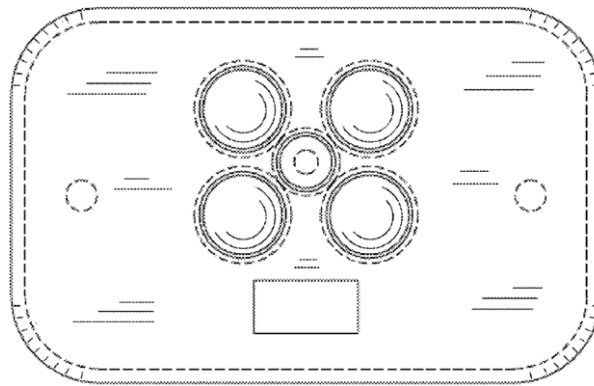


Figure 5, above, shows a top view of the claimed switch design. *Id.* at Fig. 5, code (57). The D'986 patent's Figure 2 is reproduced immediately below.

FIG. 2

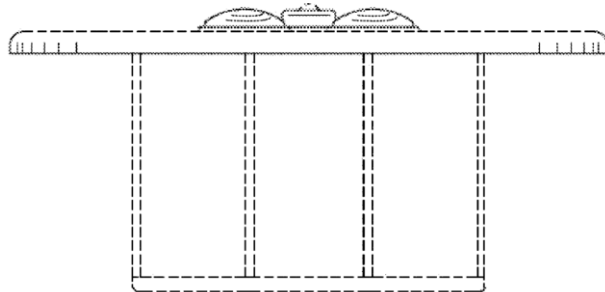
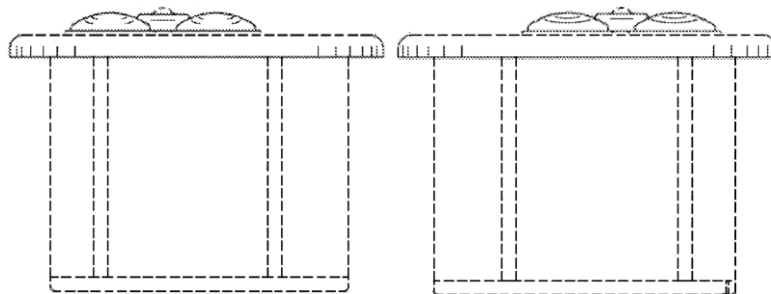


Figure 2, above, shows a side view of the claimed switch design, along a longer edge of the switch. *Id.* at Fig. 2, code (57). The D'986 patent's Figures 3 and 4 are reproduced immediately below.

FIG. 3

FIG. 4



Figures 3 and 4, above left and right, respectively, each show side views of the claimed design along shorter edges of the switch; Figure 3 shows the switch from one end and Figure 4 shows the switch from the opposite end. *Id.* at Figs. 3, 4, code (57). The D'986 patent's Figure 6 is reproduced immediately below.

FIG. 6

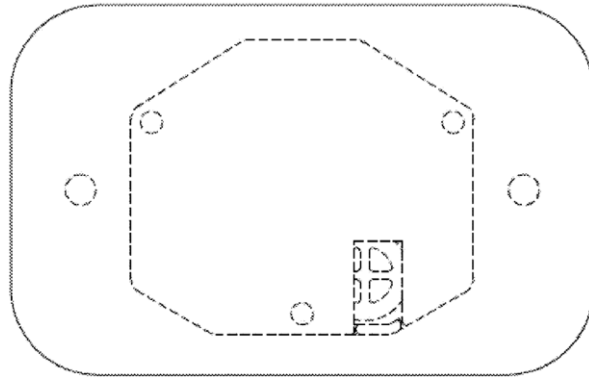


Figure 6, above, shows a bottom view of the claimed switch design. *Id.* at Fig. 6, code (57).

Patent Owner concedes that this patented design is embodied in the component labeled “CTR UR2 08” in Raffel\_sample (Ex. 1004; Ex. 1005), which is discussed *infra*. Hr’g Tr. 45:14–21.

*D. PETITIONER’S ASSERTED GROUNDS FOR UNPATENTABILITY*

Petitioner asserts two (2) grounds for unpatentability, one under 35 U.S.C. § 102(a)(1) for anticipation and on-sale bar, and the other 35 U.S.C. § 103 for obviousness, as follows. Pet. 3, 23–32.

GROUND	CLAIM CHALLENGED	35 U.S.C. §	REFERENCE(S)/BASIS
1	1	102(a)(1)	Anticipation or On-Sale Bar (as evidenced by Raffel_sample <sup>1</sup> )
2	1	103	Kintec Solution, <sup>2</sup> Hua-Dali <sup>3</sup>

In support of these grounds for unpatentability, Petitioner submitted, *inter alia*, a First Declaration<sup>4</sup> and a Second Declaration<sup>5</sup> of Linhua Huang and a Declaration of Mingshao Zhang.<sup>6</sup> Patent Owner relies, *inter alia*, upon a Declaration of Richard Weeden<sup>7</sup> and a Declaration of Paul Stangl.<sup>8</sup>

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<sup>1</sup> Nov. 17, 2015 email from “Ben Song <bsong@faffel.com>” to, among others, “Manwah-Huang Linhua <307429367@qq.com>,” including a PDF file attachment (Ex. 1004 and Ex. 1005 (English Translation), collectively “Raffel\_sample”).

<sup>2</sup> EUIPO Design Registration 001863556-0004 (registered and published June 6, 2011) (Ex. 1006, “Kintec Solution”).

<sup>3</sup> CN Industrial Design Registration 303948579 (published Nov. 30, 2016) (Ex. 1007, “Hua-Dali”).

<sup>4</sup> Declaration of Linhua Huang (Ex. 1010, “First Huang Declaration”). Ms. Huang authenticates the Raffel\_sample email (Exs. 1004 and 1005) and its attachment as true and correct copies received by her on November 17, 2015. *Id.* ¶¶ 3–5.

<sup>5</sup> Declaration of Linhua Huang in Support of Petitioner’s Reply (Ex. 1013, “Second Huang Declaration”).

<sup>6</sup> Declaration of Mingshao Zhang in Support of Man Wah Holdings Limited’s Petition for Post Grant Review of U.S. Patent No. D821,986 (Ex. 1011, “Zhang Declaration”).

<sup>7</sup> Declaration of Richard Weeden in Support of Patent Owner’s Response (Ex. 2001, “Weeden Declaration”).

<sup>8</sup> Declaration of Paul Stangl in Support of Patent Owner’s Response (Ex. 2010, “Stangl Declaration”).

*E. RAFFEL\_SAMPLE*

For the first ground presented in its Petition, Petitioner contends that the D’986 patent is unpatentable under 35 U.S.C. §102(a)(1), as being anticipated or subject to the on-sale bar, as evidenced by the Raffel\_sample email. Raffel\_sample is an email dated November 17, 2015, indicating that it was sent by “Ben Song <bsong@raffel.com>” to “Manwah-Manager Chen <chenjj@manwahgroup.com>; Manwah-Huang Linhua <307429367@qq.com>; [and] Paul Stangl <pstangl@weimerbearing.com>,” and copying “Richard Weeden <rweeden@raffel.com>; [and] Ken Seidl <kseidl@raffel.com>.” Ex. 1004; Ex. 1005. The email is also copied to “Richard Weeden <rweeden@raffel.com>” and “Ken Seidl <kseidl@raffel.com>” as “Cc” recipients. *Id.* Exhibit 1004 is the original email and is written primarily in Chinese characters. Ex. 1004. Exhibit 1005 is an English translation of Exhibit 1004. The parties agree that Exhibit 1005 is an accurate translation. Hr’g Tr. 6:9–12, 45:4–13.

The Raffel\_sample email included a PDF attachment entitled “Power Recline and Headrest by Paul 11.16.15.pdf.” Ex. 1004; Ex. 1005. Herein, we refer to the Raffel\_sample’s email portion as “Raffel\_sample email” and its attachment portion as “Raffel\_sample attachment,” and will primarily discuss the English translation. The body of the Raffel\_sample email states:

Dear Manager Huang, Mr. Chen,

This is Ben from Xiamen Raffel, Mr. Song.

I want to express my gratitude for the opportunity to visit with Manwah and the warm reception we received. I invite you to come visit Xiamen when you have the time, and I look forward to having the honor of hosting you here.

Attached you will find an offer for exclusive pricing on the CTR Series that Manwah asked about during our American leaders’

visit to your company yesterday afternoon. The pricing includes shipping fees. Please take a look at your convenience.

attached pricing for some of the 4 button controls (with and without USB) and for the CTR UR1 04 (two button with USB).

Also, this pricing is delivered to Manwah (we pay the freight charges to Manwah).

Regarding the comment yesterday about the central positioning of the USB port, this symmetry allows for the switch to be used on either side of the sofa and eliminates the need for two different switches.

This makes this switch symmetric so that it can be used on either side of a sofa without having to have two different switches.

I look forward to receiving your feedback. Should you have any needs or questions, please do not hesitate to call me. We are looking forward to the opportunity of taking our partnership to the next level. Thank you!

Ex. 1005. There is no dispute that the email, with its attachment, was sent by Patent Owner's representative to Petitioner's representatives on November 17, 2015. Hr'g Tr. 6:14–19; PO Resp. 10, 14–17 (discussing the Song email of Raffel\_sample, but not contesting its authenticity).<sup>9</sup>

The Raffel\_sample attachment includes five (5) images of “ManWah – Power Recline and Headrest Controls” with respective accompanying information relating to the “item,” “Raffel P/N” (understood to mean product number), “Price” understood to be in Chinese Yuan (RMB) currency, “VAT (17%),” “RMB & VAT,” “Min Qty” understood to mean

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<sup>9</sup> The signature of the email refers to “Ben Stiller,” but there appears to be no issue or dispute about who sent the email on behalf of Patent Owner. Ex. 1005.

minimum quantity for purchase, and “Total Price.” Ex. 1004. We note, Patent Owner has labeled these products “ManWah,” using Petitioner’s name to identify the products. *Id.* Like the body of the email, the Raffel\_sample attachment indicates its listed prices are “\*\* *Delivered Pricing*\*\*.” *Id.* The second-listed item in the Raffel\_sample attachment is reproduced below:

<b><u>ManWah - Power Recline and Headrest Controls</u></b>						
November 16, 2015						
<u>Item</u>	<u>Raffel P/N</u>	<u>Price</u>	<u>VAT (17%)</u>	<u>RMB &amp; VAT</u>	<u>Min. Qty</u>	<u>Total Price</u>
** Delivered Pricing**						
* * *						
Rectangular 5-Button Power Recline and Headrest with USB and Home Button	CTR UR2 08	57.49	9.77	67.26	1	67.26
Available in black or silver finish.						



Ex. 1004 (annotated to show headings and discussed item). The listing reproduced above has an image of a switch plate, with four domed, round buttons arranged in a regular, rectangular pattern and a fifth, smaller, cylindrical, domed button in the center of the four other buttons. *Id.* This arrangement of buttons is centered along a long edge of the switch plate and off-set along its shorter edges. *Id.* The switch plate is rectangular and has rounded corners and rounded, beveled edges. *Id.* There are two small, through-holes, each centered along the short end of the rectangular switch plate. *Id.* There is also a rectangular opening in the switch plate, centered thereon along a long edge of the plate with the five above-discussed buttons; the opening appears to house a USB port. *Id.* The image also shows a base

portion below the switch plate's surface and what appears to be an electrical cord extending therefrom. *Id.*

The Raffel\_sample attachment listing reproduced above indicates that the product of the image is called "Rectangular 5-Button Power Recline and Headrest with USB and Home Button" and indicates it is "Available in black or silver finish." Ex. 1004 ("Item" description). This listing further indicates that the Raffel product number for this item is "CTR UR2 08," that its price is "57.49," that its VAT is "9.77," that the sum of these cost is "67.26," that the minimum quantity (for purchase) is "1," and that the total price is "67.26." *Id.*

The Raffel\_sample attachment concludes with the following statements:

All sales are subject to Raffel System's (i) standard terms and conditions of sale and (ii) warranty.

These documents are available at [www.raffel.com](http://www.raffel.com).

\*NOTE: Small quantities of all items are available on demand. If large quantities are needed, there may be as much as a 10 week lead time for production. Quantities and lead times vary by item; detailed information is available upon request.

Changes to product specifications will result in price modifications.

*Id.*

*F. KINTEC SOLUTION*

Kintec Solution is a European Union Intellectual Property Office "RCD file information" for design number "001863556-0004." Ex. 1006, 1. The exhibit itself indicates it is "Man Wah Exhibit 1005," but we understand this is an error; the exhibit is filed in this proceeding as Exhibit 1006.

Kintec Solution indicates an RCD application was “received on May 13, 2011” and was “Registered and fully published” on June 6, 2011. *Id.* at 1, 2. Kintec Solution includes six (6) photograph images, which are reproduced below:



Ex. 1006, 1–2. The six figures above show a switch device from various perspectives, including from each side, from directly above, and from a perspective view above one longer side with the device slightly rotated. This last-described photograph image is reproduced again below, enlarged:



*Id.* at 1. The image above shows a switch having a rectangular plate with a brushed-aluminum or stainless steel appearance and rounded corners. *Id.* The plate has straight-edged sides and four oval-shaped buttons in oval openings in the plate, arranged in a regular rectangular configuration in the center of the plate. *Id.* Each button appears to have a substantially flat, but possibly slightly curved surface. *Id.* Each opening has a beveled lip protruding from the top of the surface of the plate, where each button extends slightly above these edges. *Id.* In the center of the rectangular configuration of these four buttons is a circular component having a circular opening defined by a circular lip. *Id.* The image also shows that the switch has a black base portion below its plate and what appears to be an electrical cord extending from the base. *Id.*

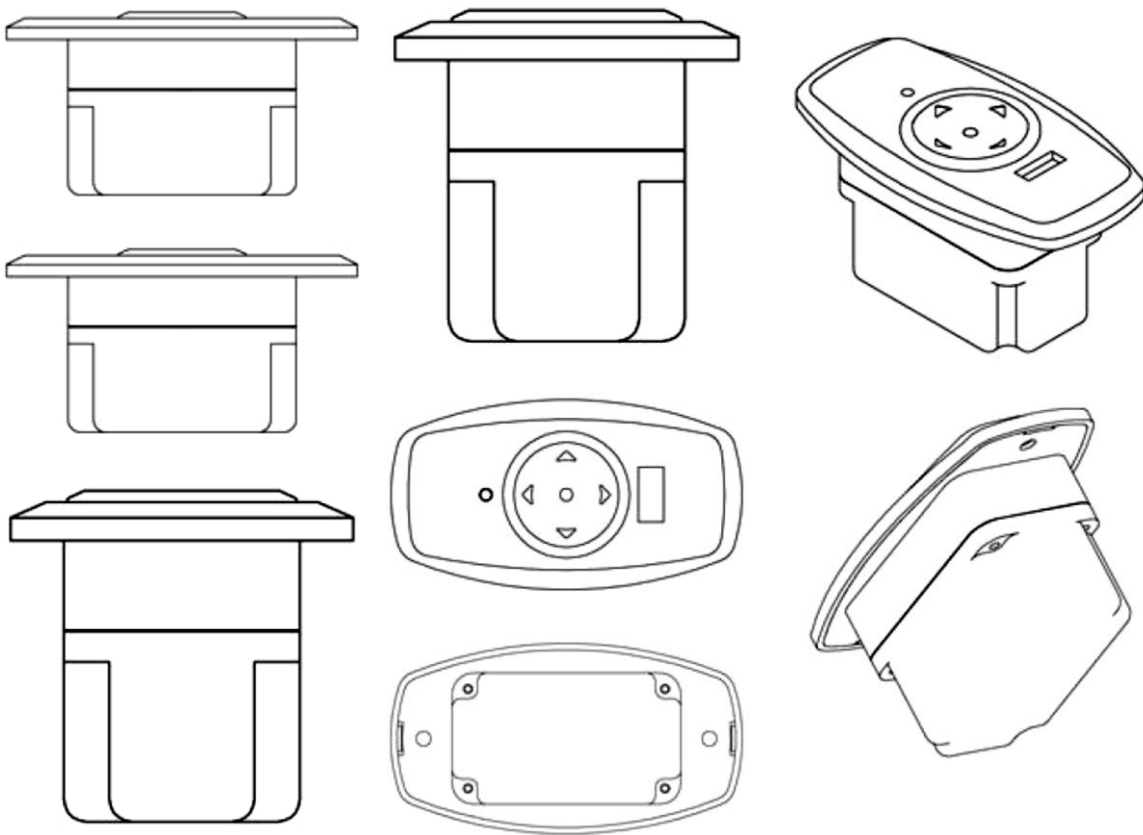
G. *HUA-DALI*

Hua-Dali is a Chinese design patent having registration number 303948579, indicated as filed on May 11, 2016, and as registered and published on November 30, 2016. Ex. 1007, 3–4. Hua-Dali states:

1. The title of the appearance design: Four-way button switch.
- 2, Intended use of the appearance design: This product of the appearance design is used for electrical equipment switch.
- 3, The key points of the appearance design: The illustrated shape.
- 4, Drawings or photographs to embody the key points of the appearance design: Stereo Fig. 1.

*Id.* at 4.

Hua-Dali includes eight (8), unlabeled drawings, which are reproduced below:



*Id.* at 1–3. The eight figures above show a switch device from each side, from the top and bottom, from a perspective view from above one corner of the switch, and from a perspective view from below one corner of the switch. *Id.*

The switch design has an oblong cover plate with a series of beveled edges and bowed-out sides. *Id.* In the center of the plate is a large, convex circular button-like component having four triangles pointing outwardly toward each side of the switch, a small central circle, and a circular border. *Id.* To one side of the circle and nearer to one shorter side of the plate is a rectangular opening, which runs parallel to that shorter side of the plate. *Id.* To the opposite side of the circle from the rectangular opening is a small circle (about the same size as the circle in the center of the circular button). *Id.* The switch has a base below its plate. *Id.*

### III. DISCUSSION

#### A. *ORDINARY LEVEL OF SKILL IN THE ART*

Petitioner contends “[a] Designer Having Ordinary Skill In The Art (DHOSITA) would generally have had either (i) a degree in Industrial Engineering or Mechanical Engineering [including] product design courses or (ii) two years of work experience creating industrial designs.” Pet. 16 (citing Zhang Declaration, Ex. 1011 ¶ 20).

Patent Owner asserts

The appropriate Designer Having Ordinary Skill In The Art (“DHOSITA”) here is “a designer of furniture or furniture components (including electronic switches for use in powered motion furniture), one who either (i) earned a degree in Industrial Engineering or Mechanical Engineering, or (ii) has at several years of relevant experience in such designs.

PO Resp. 4. Patent Owner argues that Petitioner’s proposed definition of the skilled designer is “overbroad and contrary to established case law because it does not include any reference to the type of article being designed.” *Id.* at 5.

Petitioner’s definition of the designer’s level of ordinary skill in the art is supported by the Zhang Declaration. Ex. 1011 ¶ 20. Patent Owner fails to cite any support in the record for its proposed definition. Although we agree that obviousness of a design patent must be assessed from the perspective of “a designer of ordinary skill who designs articles of the type involved,” we are not persuaded that the designer must have specific experience in designing furniture or furniture components (including electronic switches for use in powered motion furniture). *See Durling v. Spectrum Furniture Co.*, 101 F.3d 100, 103 (Fed. Cir. 1996). Therefore, we accept and use Petitioner’s above-quoted definition of the skilled designer. However, we note that our ultimate decision here would not be affected regardless of which party’s definition we use.

*B. CLAIM CONSTRUCTION*

Based on the filing date of the Petition (Jan. 1, 2019), the Board interprets claim terms in a post-grant review (“PGR”) using the same claim construction standard that is used to construe claims in a civil action in federal district court. *See* Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340, 51,340, 51,358 (Oct. 11, 2018) (amending 37 C.F.R. § 42.100(b) effective November 13, 2018) (now codified at 37 C.F.R. § 42.100(b) (2019)). However, the claim of the D’986 patent does not require express construction for the purposes of this decision. *See, e.g.*, PO Resp. 5. On that point, we observe that Figures 1–6 of the D’986 patent (Ex. 1001) reflect the scope of the patented design. *See Egyptian Goddess, Inc. v. Swisa, Inc.*, 543 F.3d 665, 679 (Fed. Cir. 2008) (“[A] design is better represented by an illustration ‘than it could be by any description and a

description would probably not be intelligible without the illustration.”  
(quoting *Dobson v. Dornan*, 118 U.S. 10, 14 (1886)) (en banc).

To the extent any explanation of that scope is necessary to this decision, we provide it below in our analysis of the asserted challenge. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Ltd.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

C. APPLICABLE LEGAL STANDARDS FOR UNPATENTABILITY

The Leahy–Smith America Invents Act (AIA) bars a person from receiving a patent on an invention that was “in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention.” 35 U.S.C. § 102(a)(1).

When considering whether a claimed design is anticipated over a prior art disclosure the factual inquiry is the same as in utility patent applications, that is, the reference “must be identical in all material respects,” or put another way, the claimed design and the prior art design must be substantially the same. *Hupp v. Siroflex of America Inc.*, 122 F.3d 1456, 1461 (Fed. Cir. 1997); *Door-Master Corp. v. Yorktowne, Inc.*, 256 F.3d 1308, 1313 (Fed. Cir. 2001) (citing *Gorham Mfg. Co. v. White*, 81 U.S. 511, 528 (1871)). A printed publication can anticipate a patent’s claim and our reviewing court has interpreted Section 102

in light of its purpose “to prevent withdrawal by an inventor . . . of that which was already in the possession of the public.” *Medtronic, Inc. v. Barry*, 891 F.3d 1368, 1380 (Fed. Cir. 2018) (alteration in original) (quoting *In re Wyer*, 655 F.2d 221, 226 (CCPA 1981)). “Because there are many ways in which a

reference may be disseminated to the interested public, ‘public accessibility’ has been called the touchstone in determining whether a reference constitutes a ‘printed publication’ . . . .” *In re Hall*, 781 F.2d 897, 898–99 (Fed. Cir. 1986). A reference is considered publicly accessible “upon a satisfactory showing that such document has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it.” *Wyer*, 655 F.2d at 226. “If accessibility is proved, there is no requirement to show that particular members of the public actually received the information.” *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1569 (Fed. Cir. 1988).

*Jazz Pharm., Inc. v. Amneal Pharm., LLC*, 895 F.3d 1347, 1355–56 (Fed. Cir. 2018). Public accessibility to online material is sufficient for such material to be a “printed publication.” *Id.* at 1356–60.

The test for anticipation of a design claim is the “ordinary observer test.” *Int’l Seaway Trading Corp. v. Walgreens Corp.*, 589 F.3d 1233, 1240 (Fed. Cir. 2009). Two designs are substantially the same under the ordinary observer test if, in the eye of an ordinary observer, giving such attention as a purchaser usually gives and being familiar with prior art designs, the resemblance is such as to deceive such an observer, inducing her to purchase one supposing it to be the other. *Gorham*, 81 US 511; *Richardson v. Stanley Works*, 597 F.3d 1295 (Fed. Cir. 2010). The “ordinary observer test requires consideration of the design as a whole.” *See Int’l Seaway*, 589 F.3d at 1243; *Egyptian Goddess*, 543 F.3d at 677.

The “on-sale” bar under Section 102 applies to design patents. *Continental Plastic Containers v. Owens Brockway Plastic Products, Inc.*, 141 F.3d 1073, 1077 (Fed. Cir. 1998). The Supreme Court has held that

the pre-AIA on-sale bar applies “when two conditions are satisfied” more than a year before an inventor files a patent

application. *Pfaff [v. Wells Electronics, Inc.]*, 525 U.S. [55], at 67 . . . [(1998)]. “First, the product must be the subject of a commercial offer for sale.” *Ibid.* “Second, the invention must be ready for patenting,” which we explained could be shown by proof of “reduction to practice” or “drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention.” *Id.*, at 67–68 . . . .

*Helsinn Healthcare S.A. v. Teva Pharm. USA, Inc.*, 139 S. Ct. 628, 633 (2019). The AIA has done away with the statutory language requiring that the offer for sale be in the United States, but, otherwise, the AIA did not alter the meaning of the “on sale” bar from pre-AIA law. *Id.* “[A] commercial sale [triggering the on-sale bar] is one that bears the general hallmarks of a sale pursuant to Section 2-106 of the Uniform Commercial Code,” which states that “[a] ‘sale’ consists in the passing of title [i.e., ownership,] from the seller to the buyer for a price.” *Medicines Co. v. Hospira, Inc.*, 827 F.3d 1363, 1365 (Fed. Cir. 2016); U.C.C. § 2-106 (AM. LAW INST. & UNIF. LAW COMM’N 2012).

Turning to obviousness, “[i]n determining the patentability of a design, it is the overall appearance, the visual effect as a whole of the design, which must be taken into consideration.” *See In re Rosen*, 673 F.2d 388, 390 (CCPA 1982). The standard is whether the design would have been obvious to a designer of ordinary skill who designs articles of the type involved, and it is from this “designer of ordinary skill” perspective, as opposed to anticipation’s ordinary observer, from which obviousness is determined. *See In re Nalbandian*, 661 F.2d 1214, 1217 (CCPA 1981).

To make out a successful obviousness challenge, one must identify “a reference, a something in existence, the design characteristics of which are basically the same as the claimed design . . . . Such a reference is necessary

whether the holding is based on the basic reference alone or on the basic reference in view of modifications suggested by secondary references.” *Rosen*, 673 F.2d at 391. Accordingly, “the first step in an obviousness analysis for a design patent requires a search of the prior art for a primary reference,” which requires the tribunal “to: (1) discern the correct visual impression created by the patented design as a whole; and (2) determine whether there is a single reference that creates ‘basically the same’ visual impression.” *Durling*, 101 F.3d at 103. Obviousness may be concluded if a designer of ordinary skill would have been motivated to modify such a primary reference by modifying, adding, or deleting features thereof in view of a pertinent secondary reference.

In order for secondary references to be considered in an obviousness analysis, “there must be some suggestion . . . to modify the basic design with features from the secondary references.” *See In re Borden*, 90 F.3d 1570, 1574 (Fed. Cir. 1996). The long-standing test for properly combining references has been “whether they are so related that the appearance of certain ornamental features in one would suggest the application of those features to the other.” *See In re Glavas*, 230 F.2d 447, 450 (CCPA 1956).

With these standards in mind, we address Petitioner’s challenges below.

*D. THE CLAIM IS UNPATENTABLE UNDER THE ON-SALE BAR OF 35 U.S.C. § 102(a)(1)*<sup>10</sup>

Petitioner relies upon, for its first ground for unpatentability, the “[c]ertified Raffel’s on sale product description for a power recline and

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<sup>10</sup> Although we noted in our Institution Decision that it was somewhat unclear whether Petitioner intended for its first ground “to be premised upon classical anticipation over a prior art publication, or upon the on-sale bar, or

headrest control. ('Raffel\_sample')." Pet. 2. Petitioner asserts that "Raffel\_sample qualifies as prior art because it was on sale to the public before the effective filing date of January 31, 2017 for the '986 patent." *Id.* at 8 (citing Ex. 1004; Ex. 1005; Ex. 1010.). Petitioner further asserts that "[o]n November 17, 2015, Raffel's wholly owned subsidiary Xiamen Raffel communicated an offer via email to sell products to Man Wah. *See* Ex. 1004. As stated in the November 17, 2015 email, a document is attached to the email. *Id.* In the attached document of the November 17, 2015 email, Raffel\_sample is included<sup>[1]</sup>. *See* Ex. 1010." *Id.*

Regarding the similarities between the Raffel\_sample and the patented design, Petitioner asserts:

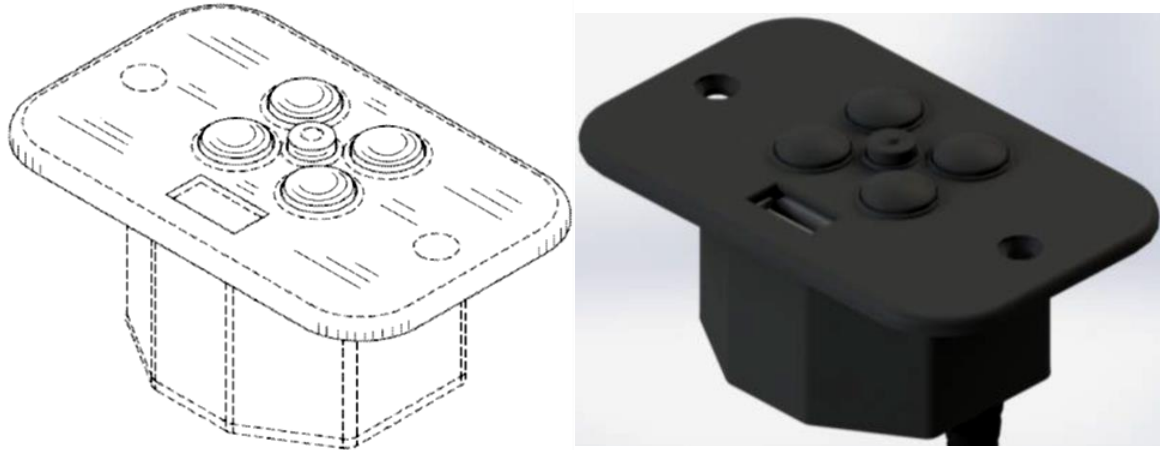
Raffel\_sample anticipates the ornamental designed [*sic*] claimed in the '986 patent because it discloses the each and every element of the design claimed in the '986 patent including: (a) a four-sided surface with four corners rounded; (b) four rounded buttons; (c) a rounded central component in the middle of the four rounded buttons; and (d) a rectangular hole away from the four-button group. Demonstratives showing where elements (a), (b), (c) and (d) are located in both Raffel\_sample and in the '986 patent are provided in the sections below.

*Id.* at 23 (citing Ex. 1011 ¶ 45). Petitioner provides the following side-by-side comparison between Figure 1 of the D'986 patent and an image of a product reproduced from the PDF attachment of "Raffel\_sample":

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upon both" (Inst. Dec. 15), we focus on the on-sale bar with respect to this ground as it is dispositive for our unpatentability determination.

FIG. 1



*Id.* at 24. The image above-left shows Figure 1 from the D’986 patent and the image above-right shows a product from the PDF attachment to the Song email, which the PDF attachment identifies as “Rectangular 5-Button Power Recline and Headrest with USB and Home Button” and Raffel P/N (product number) “CTR UR2 08.” Ex. 1001, Fig. 1; Ex. 1004 (attachment).

Regarding the above side-by-side image comparison, Petitioner states, “[a]s shown above, each and every element of the design claimed in [D]’986 patent is present in Raffel\_sample.” Pet. 24; Ex. 1011, ¶ 45.

Patent Owner does not contest the authenticity of the Raffel\_sample email or attachment. *See generally* PO Resp.; PO Sur-reply. Patent Owner concedes that this product set forth in Raffel\_sample attachment and discussed in Raffel\_sample email embodies the patented design of the D’986 patent. Hr’g Tr. 45:14–21.

In discussing the Raffel\_sample, Petitioner’s witness, Mingshao Zhang, states:

*It is my understanding that, on November 17, 2015, Raffel's wholly owned subsidiary Xiamen Raffel communicated an offer via email to sell products to Man Wah. As stated in the November 17, 2015 email, a document is attached to the email. In the attached document of the November 17, 2015 email, Raffel\_sample [(CTR UR2 08)] is included. It is stated in the attached document that "[t]hese documents are available on www.raffel.com."*

Ex. 1011 ¶ 25 (emphasis added). Mr. Zhang goes on to state:

*It is my understanding and as shown above, Raffel offers to sell Man Wah the highlighted Raffel\_sample product [(CTR UR2 08)]. The offer includes the product description, price and taxes. Additionally, it is stated in the attached document that "[t]hese documents are available on www.raffel.com." No passwords and/or special links are provided in the attached document for accessing www.raffel.com, thus, in my opinion, www.raffel.com can be publicly accessible. Therefore, Raffel\_sample [(CTR UR2 08)] is on sale to the public at least on November 17, 2015, which is fourteen (14) months before January 31, 2017 for the '986 patent.*

Ex. 1011 ¶ 26 (emphasis added).

Mr. Zhang's statements regarding the product shown in Raffel\_sample being on sale are further supported by the testimony of Petitioner's witness, Linhua Huang. *See* Ex. 1013 ("Second Huang Declaration"). Ms. Huang states that she has "work[ed] in Man Wah's purchasing department since September, 2014" and "was promoted to be a manager in October 2015 and [ ] became deputy director of the purchasing department in April 2019." Ex. 1013 ¶ 1. Ms. Huang states that Raffel Systems (Patent Owner) is a parts supplier under her management, including "the product at issue in this proceeding." *Id.* ¶ 2. Ms. Huang further states:

On November 17, 2015, I received an email from Ben Song (bsong@raffel.com) offering certain Raffel CTR series switches for sale at particular prices (the "Song email").

Attached to the Song email was a document titled “Man Wah-Power Recline and Headrest Controls,” which was dated November 16, 2015. Among the switch designs listed was a switch entitled “Rectangular 5-Button Power Recline and Headrest with USB and Home Button.” My understanding is that this switch was listed as being for sale at the quoted price.

The Song email was comparable to other supplier emails that I have received in my position as manager of Man Wah’s purchasing department including from Raffel.

*Id.* ¶¶ 3–4. Ms. Huang further states:

Accordingly, upon receiving an email such as the Song email, it would be my full expectation that Man Wah would have been able to order at least a small number of the products being offered for commercial evaluation according to the offered prices and terms, and that Raffel was also offering to supply the listed products at the quoted prices.

*Id.* ¶ 4.

Patent Owner argues the Raffel\_sample email and attachment was not an offer for sale for the product embodying the patented design. PO Resp. 10. Patent Owner takes the position that the Raffel\_sample email constitutes only an offer for exclusive pricing for the products listed in the Raffel\_sample attachment. *Id.* at 14. As already noted, Patent Owner does not dispute the content of the Raffel\_sample email and attachment or its authenticity. Rather, it is Patent Owner’s position that the email must be contextually interpreted to be merely an initial maneuver in “preliminary negotiations” for a “Supply Agreement” between the parties, as understood to be customary practice in the furniture industry commercial community. *Id.* at 14–17. More specifically, it is Patent Owner’s position that the Raffel\_sample (Ex. 1004; Ex. 1005) email and attachment constituted, at

most, an invitation for an offer because “the only legal offer comes via purchase order from Man Wah.” *Id.* at 15.

Patent Owner submits and cites the Stangl Declaration as supporting its position. *Id.* (citing Ex. 2010 ¶¶ 12–19). Mr. Stangl states that he is the Vice Chairman of Raffel and has been with the company for 11 years (as of his declaration). Ex. 2010 ¶ 1. In relevant part, Mr. Stangl takes the position that

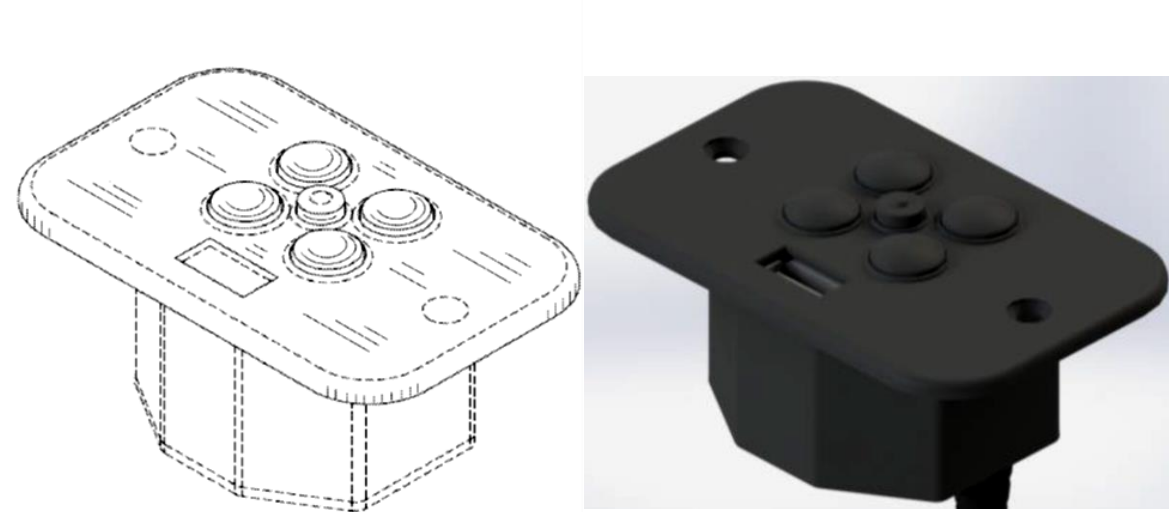
The Song e-mail and attached Raffel\_sample publication do not evidence a commercial offer to sell in the furniture industry. Instead, as described below, the email and attachment are the first step in a discussion that might or might not lead to an offer, not an offer to sell by Raffel, but rather an offer to purchase by a manufacturer such as Man Wah.

*Id.* ¶ 12. Mr. Stangl states that the custom in the furniture industry is that component suppliers and furniture manufacturers (Raffel and Man Wah, respectfully) communicate and negotiate with one another before any formal offer to purchase by the manufacturer, which occurs via a purchase order, and which can be accepted or rejected by the supplier. *Id.* ¶ 13. Mr. Stangl states that the Raffel\_sample email and attachment was merely a part of negotiations that culminated in a Supply Agreement, which then dictated the buying and selling between the parties. *Id.* ¶ 14 (citing Exs. 2002–2003 (a Supply Agreement contract and an English Translation thereof)).

Having considered Petitioner’s and Patent Owner’s contentions and evidence, we find that Petitioner’s evidence supports a finding that on November 17, 2015, i.e., more than a year prior to January 31, 2017, there was a concrete offer for the sale of the product shown in the Raffel\_sample attachment, called “Rectangular 5-Button Power Recline and Headrest with USB and Home Button CTR UR2 08,” which, as discussed above and

shown once more below (D'986 patent Fig. 1 and CTR UR2 08 of Ex. 1004 are reproduced below), has a design identical to that claimed in the D'986 patent. *See* Pet. 8; Ex. 1011 ¶¶ 26–28, 45 (Mr. Zhang describing the product for sale in Raffel\_sample as that of the design claimed in the D'986 patent).

FIG. 1



Ex. 1001, Fig. 1; Ex. 1004 (attachment). The D'986 patent's Figure 1 and Raffel\_sample figure, reproduced above, have been discussed above herein.

It is readily discernable, and Patent Owner has conceded (Hr'g Tr. 45:14–21 (PANEL: Regarding “Raffel Part Number CTR 19 UR2 08, you're not, you're also not contesting that that embodies the patented design are you?” PATENT OWNER: “No we're not.”)), that the Raffel\_sample has a design identical to that claimed in the D'986 patent. We conclude that an ordinary observer and a designer having ordinary skill in the art would have found these two designs to be identical and, therefore, that the product identified in the Raffel\_sample as CTR UR2 08 was the patented design of the D'986 patent.

There is no dispute that the Raffel\_sample email was sent by Patent Owner to Petitioner on November 17, 2015, which is more than one year prior to the D'986 patent's filing date of January 31, 2017. Ex. 1004; Ex. 1005; Ex. 1001, code (22); *see generally* PO Resp.; Ex. 2001 (Weeden Declaration); Ex. 2010 (Stangl Declaration) (none of which contest the authenticity of the Raffel\_sample email and attachment or the dates indicated thereon). Ms. Huang confirms that the Raffel\_sample email and attachment was received by her, from Ben Song of Raffel, on November 17, 2015. Ex. 1010 ¶ 3; Ex. 1013 ¶ 3.

The Federal Circuit, in *Hamilton Beach Brands, Inc. v. Sunbeam Products, Inc.*, explained the application of the on-sale bar, under Supreme Court and the Federal Circuit's own precedent, as follows:

The on-sale bar applies when two conditions are satisfied before the critical date: (1) the claimed invention must be the subject of a commercial offer for sale; and (2) the invention must be ready for patenting. *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 67, 119 S.Ct. 304, 142 L.Ed.2d 261 (1998). An actual sale is not required for the activity to be an invalidating commercial offer for sale. *Atlanta Attachment Co. v. Leggett & Platt, Inc.*, 516 F.3d 1361, 1365 (Fed.Cir.2008). An attempt to sell is sufficient so long as it is "sufficiently definite that another party could make a binding contract by simple acceptance." *Id.* (citing *Netscape Commc'ns Corp. v. Konrad*, 295 F.3d 1315, 1323 (Fed.Cir.2002)). "In determining such definiteness, we review the language of the proposal in accordance with the principles of general contract law." *Id.*

*Hamilton Beach*, 726 F.3d 1370, 1374–75 (Fed. Cir. 2013). Here, there is no dispute that the invention, i.e., the claimed design, was ready for patenting and that it is embodied in the Raffel\_sample (Ex. 1004). Thus, we concern our analysis with whether the Raffel\_sample email and attachment constituted a commercial offer for sale. *See, e.g., Merck & Cie v. Watson*

*Labs.*, 822 F.3d 1347, 1351 (Fed. Cir. 2016) (“because Merck does not challenge the district court's determination that ‘MTHF was . . . ready for patenting by September 1998,’ . . . our focus is on whether there was an invalidating commercial offer to sell the product prior to the critical date”).

In *Hamilton Beach*, the patent owner issued a purchase order to a supplier, which was directed to the patented invention, listed a shipping address, a billing address, and a quantity of units. *Hamilton Beach*, 726 F.3d at 1375. The supplier confirmed receipt of and responded to this order via email with an indication that it would begin production of the units upon receiving a release from the patent owner. *Id.* The evidence indicated that this was typically the way such transactions were handled in the industry. *Id.* at 1376. The Federal Circuit held that the moment the supplier responded that it would produce the products for the patent owner if the patent owner responded with a release, a commercial offer for sale was made—an offer for the invention that could be accepted was extended. *Id.* at 1377. The Federal Circuit found that other surrounding circumstances, such as the requirement for a “release” before production would begin and a separate “corporate purchase agreement” between the parties requiring “certified review and approval” of final products by the patent owner, were not determinative of whether there was an offer for sale. *Id.* The Federal Circuit made very clear that an offer for sale foreclosing patentability need not amount to a contract, but only requires an offer that could be accepted. *Id.*

In *Merck*, the Federal Circuit held that where language of an alleged offer for sale is unambiguous, it is not overruled by subsequent testimony from witnesses as to surrounding circumstances regarding the seller’s intent,

or that a sale would not have actually been completed. *Merck*, 822 F.3d at 1354. In *Merck*, after some back-and-forth interactions between the parties, a “not . . . unsolicited” communication (a fax) was provided by the patent owner to the would-be-purchaser, which included an identification of the product, an amount, a price, and information on delivery and payment, with no qualifications by the patent owner. *Id.* at 1349–52. The Federal Circuit held that this, on its face, qualified as a commercial offer for sale, rendering the patent-at-issue invalid under the on-sale bar. *Id.* at 1351, 1355.

The circumstances here are similar to and as clear as, if not more-so, those of *Hamilton Beach* and *Merck*. The Raffel\_sample unambiguously states, “[a]ttached you will find *an offer* for exclusive pricing on the CTR Series that Manwah asked about during our American leaders’ visit to your company yesterday afternoon.” Ex. 1005 (emphasis added). The “exclusive pricing” expressly offered did not exist as merely a hypothetical, but rather, prices were quoted for the purchase of the specifically listed goods. Ex. 1004. Furthermore, the Raffel\_sample email and attachment: (1) identifies the patented product—“CTR UR2 08”; (2) is a not-unsolicited offer—“Attached you will find an offer for exclusive pricing on the CTR Series that Manwah asked about during our American Leader’s visit to your company yesterday afternoon.”; (3) includes a set price—“67.26” RMB per unit; (4) indicates the price included costs for the product be “delivered to Manwah”; and (5) also identifies the quantity of product available for purchase—“Min Qty” was “1.” Ex. 1004; Ex. 1005. In view of these terms, all that was required for Man Wah to complete the sale would have been for it to order a switch under these “exclusive” terms for such “ManWah” products.

Thus, we find that the Raffel\_sample email and attachment constitute a concrete offer by Patent Owner to sell the product identified as “CTR UR2 08,” i.e., the patented design of the D’986 patent, to Petitioner, more than a year before the effective filing date of the claimed invention. *See Group One, Ltd. v. Hallmark Cards, Inc.*, 254 F.3d 1041, 1048 (Fed. Cir. 2001) (“[A] commercial offer for sale” is “one which the other party could make into a binding contract by simple acceptance (assuming consideration).”).

We are not persuaded by Patent Owner’s arguments or evidence. The above-discussed offer for sale applies to any amount of products with the patented design, but at a minimum just one.

Patent Owner proffers as evidence a Supply Agreement between Man Wah Furniture Manufacturing Huizhou Co., Ltd. and Xiamen Raffel Electronic Trading Co., Ltd. for the period January 1, 2016 to December 31, 2016. Ex. 2003. On its face, this Supply Agreement contemplates the establishment of “a strategic business partnership” and purchases “equal to or greater than RMB 1 million,” at “the most favorable price” for Petitioner. *Id.* at 1, 3. As such, the Supply Agreement appears wholly unrelated to the terms and conditions contemplated in the Raffel\_sample email and attachment, which refer to the purchase of one unit by Petitioner for a price less than 70 RMB, shipped and delivered. The “Supply Agreement,” its terms, and any negotiations relating thereto, does not change the fact that the Raffel\_sample email itself constituted an offer for sale. Regardless of what might be specifically included as part of a later-formed Supply Agreement, or whether such Supply Agreements were standard practice for interactions and relationships between parties in the furniture industry, it is clear by the terms of the Raffel\_sample email that Petitioner could have purchased at

least a single unit of the CTR UR2 08 product at the price indicated in the November 17, 2015 email. Ex. 1005. Beyond this Supply Agreement, Patent Owner does not point to any evidence as to the “standard practice in the furniture industry.” Ex. 2010 ¶¶ 18–19; Hr’g Tr. 34:21–35:22 (acknowledging that Patent Owner’s only evidence of how furniture dealers allegedly conduct offers for sale is the Stangl Declaration testimony, which we find conclusory and, therefore, unpersuasive).

For the reasons above, we find Petitioner has proven by a preponderance of the evidence that the claim challenged in the Petition is unpatentable under 35 U.S.C. § 102 under the on-sale bar.

*E. PETITIONER HAS NOT PROVEN THAT THE ATTACHMENT TO RAFFEL\_SAMPLE IS PUBLISHED PRIOR ART*

Petitioner also separately asserts that Raffel\_sample is an anticipating prior art publication because it is stated in the attached document that “[t]hese documents are available on [www.raffel.com](http://www.raffel.com),” and no passwords and/or special links were provided in the Raffel\_sample attachment document for accessing [www.raffel.com](http://www.raffel.com). Pet. 8 (citing Ex. 1011 ¶ 26); Ex. 1004. Petitioner cites the Zhang Declaration as support for the proposition that Raffel\_sample’s attachment was an anticipatory publication, wherein Mr. Zhang opined that the “CTR UR2 08” product was published and available for sale to the public via the [raffle.com](http://raffle.com) website, with no access restrictions, on November 17, 2015, based on the Raffel\_sample attachment’s statement “[t]hese documents are available [at] [www.raffel.com](http://www.raffel.com).” Ex. 1011, ¶¶ 25–26.

We find this to be insufficient evidence that the Raffel\_sample was publicly available on the [raffle.com](http://raffle.com) website.

“Because there are many ways in which a reference may be disseminated to the interested public, ‘public accessibility’ has been called the touchstone in determining whether a reference constitutes a ‘printed publication’ bar under 35 U.S.C. § 102(b).” *In re Hall*, 781 F.2d 897, 898–99 (Fed. Cir. 1986). A reference will be considered publicly accessible if it was “disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence, can locate it.” *Kyocera Wireless Corp. v. Int’l Trade Comm’n*, 545 F.3d 1340, 1350 (Fed. Cir. 2008).

*Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1348 (Fed. Cir. 2016).

In *Blue Calypso*, the Federal Circuit found the record devoid of evidence that the skilled artisan would have known of a webpage alleged to have provided access to an alleged prior art publication or even that an online search engine query using any combination of search words before the critical date would reveal the webpage. *Id.* at 1349–50. Based on this, and the lack of further evidence establishing the alleged publication was publically accessible, the Federal Circuit held the proffering party failed to carry its burden of proving public accessibility of the reference and affirmed the Board’s rejection of arguments relying on the reference. *Id.* at 1350–51.

Here, Petitioner relies only on the conclusion of its witness Mr. Zhang that the information relating to the patented design shown in Raffel\_sample was publically available. Pet. 8. Mr. Zhang, himself, relies only on his interpretation of the statement on the Raffel\_sample attachment that documents were available on a website, as noted above. Ex. 1011 ¶¶ 25–26. Mr. Zhang offers no proof of actual publication.

Patent Owner argues that Petitioner did not demonstrate the necessary public accessibility. PO Resp. 7. Patent Owner submits the declaration of Mr. Weeden, who stated that the images and product descriptions of the

Raffel\_sample were not available on the Raffel website, as alleged by Petitioner, on or before January 31, 2016. *See* Ex. 2001 ¶ 6. Mr. Weeden states that the first time the switch designated as “Rectangular 5 Button power and Headrest with USB and Home Button,” i.e., CTU UR2 08, was published on Patent Owner’s website was November 14, 2017. *Id.* ¶ 6.

Patent Owner also submits evidence in the form of the Affidavit of Christopher Butler and accompanying screen shots obtained using the “Way-Back-Machine.” Ex. 2012; Ex. 2006–2009. Mr. Butler states that, as the Office Manager at the Internet Archive, which provides a service known as the Wayback Machine,” the images of Exhibit A of his Affidavit, which are Ex. 2006–2009, respectively, show true and correct images of the identified website on the dates reflected in their footers, i.e., raffel.com/Home/Products on January 14, 2016 (Ex. 2006; Ex. 2007), and on November 18, 2016 (Ex. 2008; Ex. 2009). Ex. 2012 ¶¶ 3–6. Patent Owner argues that this proves its website did not link to or image, or otherwise publish, the switch at issue. PO Resp. 8, note 1.

Patent Owner argues Mr. Zhang’s testimony amounts to mere speculation that the Raffel\_sample switch was published before January 31, 2017. *Id.* at 8–10. Patent Owner asserts that Mr. Zhang did not know nor attempt to confirm that there was a publication as alleged. *Id.* Mr. Zhang confirmed this as true during his deposition. Ex. 2011, 45:1–46:20.

We agree with Patent Owner’s reading the portion of the Raffel\_sample attachment stating:

All sales are subject to Raffel System’s (i) standard terms and conditions of sale and (ii) warranty.

These documents are available at [www.raffel.com](http://www.raffel.com).

\*NOTE: Small quantities of all items are available on demand. If large quantities are needed, there may be as much as a 10 week lead time for production. Quantities and lead times vary by item; detailed information is available upon request.

Changes to product specifications will result in price modifications.

Ex. 1004; *see also* PO Resp. 9–10 (“the documents referenced as available on the website are Raffel Systems’ standard terms and conditions of sale and warranty, and not the Raffel\_sample PDF or in any way related to the switch at issue in this matter.”). In its full context, as set forth above, the statement “[t]hese documents are available at [www.raffel.com](http://www.raffel.com)” does not read as indicating the products of the attachment are accessible or published on the website. Ex. 1004. Rather, the plain reading of this language indicates that Raffel’s “standard terms and conditions” and “warranty” were available on its website, with no direct relation to the products shown above in the document above the statement. *Id.* We agree with Patent Owner that this is the correct reading of the language. PO Resp. 9–10.

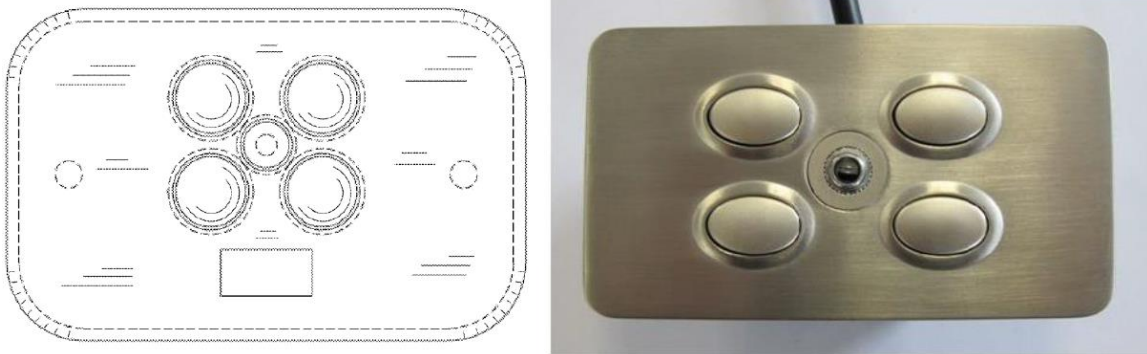
Petitioner, neither in its Petition nor Reply, offers any persuasive argument or evidence tending to show that our and Patent Owner’s reading of this language is incorrect. Petitioner offers no other evidence that the products in the Raffel\_sample were publically accessible.

For the reasons above, we find Petitioner has not proven by a preponderance of the evidence that the claimed design is anticipated by a prior publication.

*F. PETITIONER’S OBVIOUSNESS CASE IS NOT PERSUASIVE*

Petitioner contends “Kintec\_Solution provides ‘basically the same visual impression’ as the design claimed in the ’986 patent,” “[a]s illustrated [by a visual comparison of] Kintec\_Solution and the ’986 patent depict[ing]

a switch with buttons on a surface. Ex. 1011, ¶ 47.” Pet. 24–25. Petitioner reproduced the D’986 patent’s Figure 5 and an image of Kintec Solution, as follows:

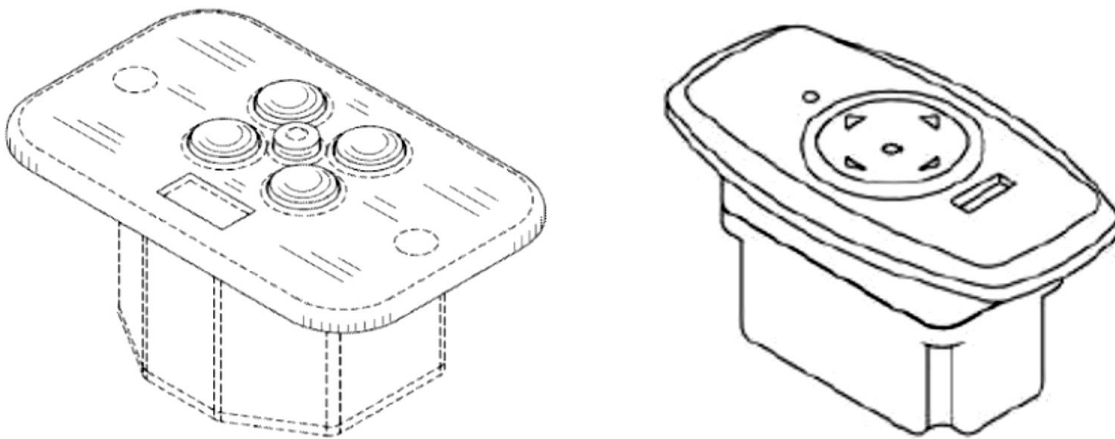


*Id.* at 25. The D’986 patent’s Figure 5 is shown above-left and Kintec Solution image, which is a photograph of a faceplate with four centered and equally spaced in a rectangular configuration, oval-shaped buttons protruding from openings therein, surrounding some feature at the centermost point of the faceplate, is shown above-right. Ex. 1001, Fig. 5; Ex. 1006, 2.

Petitioner concedes that there are design differences between the patented design and Kintec Solution (identifying that Kintec Solution’s buttons are not circular and the face plate has no rectangular hole, e.g., for a USB plug), but contends that the designer of ordinary skill would nonetheless consider the two designs to create basically the same visual impression. Pet. 25–27 (citing *In re Nalbandian*, 661 F.2d 1214, 1215 (CCPA 1981)). Thus, Petitioner contends Kintec Solution is a primary reference, which conveys basically the same design as claimed, but which could be modified in view of pertinent secondary references to fully teach or suggest the claimed design.

Petitioner argues it would have been obvious to add a rectangular hole on the switch as claimed in the D’986 patent in view of CN204315857 (Exhibit 1008, “CN’857”). Pet. 27–28. Petitioner contends CN’857 shows a hole in a switch face plate for a USB plug and “difference here involves merely adding a rectangular hole apart from the four-button group on the surface of a button switch.” *Id.* at 28. The CN’857 reference is not, however, expressly combined with Kintec Solution by Petitioner under Ground 2. CN’857 is merely cited as evidence that adding a rectangular hole would be an obvious modification to Kintec Solution. Petitioner does expressly combine Hua-Dali with Kintec Solution for this purpose, however. Pet. 30. Petitioner contends:

Hua-Dali discloses the design of the button switch that has four outside components, one central component, and a rectangular hole on the surface that is away from the button group. Ex. 1011, ¶ 58. A comparison of the design of the ’986 patent and Hua-Dali is provided below:



*Id.* The D’986 Figure 1 is shown above-left and the 7<sup>th</sup> figure of Hua-Dali is shown above-right. Ex. 1007, 3. Petitioner contends “[a] DHOSITA would have found it obvious to add the rectangular hole on the surface taught by

Hua-Dali in the design of the primary reference Kintec\_Solution. Ex. 1011, ¶ 59.” Pet. 31 (citing Zhang Declaration ¶ 59).

As for the differently shaped buttons of the Kintec Solution compared to the claimed design, Petitioner contends:

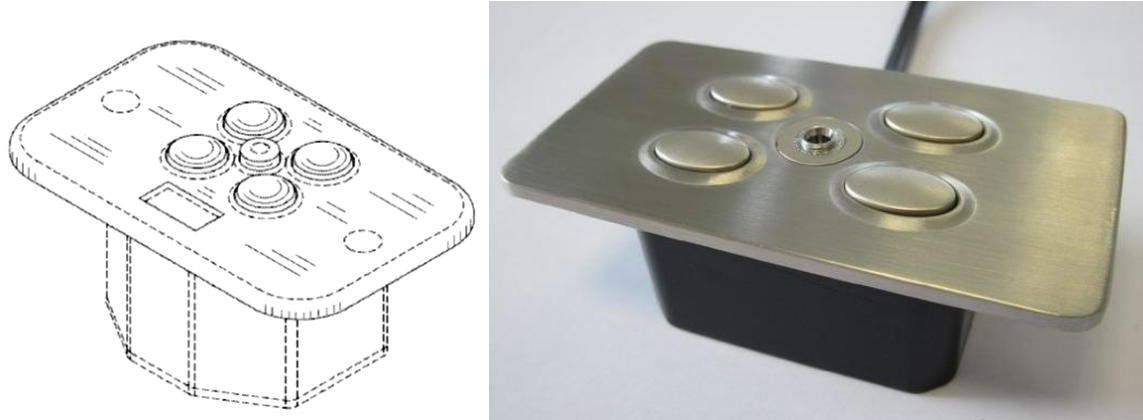
A DHOSITA would have found it obvious to alter the oval shaped buttons of Kintec\_Solution to different shapes. Ex. 1011, ¶ 55. Both the oval shaped button and the circular button are rounded buttons. *Id.* As such, the circular rounded button for a switch is a *de minimis* obvious design variation of Kintec\_Solution. *Id.* Accordingly, it would have been immediately apparent and well within the knowledge and skill of a DHOSITA to alter the oval shaped buttons in Kintec\_Solution to arrive the claimed design of the ’986 patent. *Id.*

Pet. 29.

In our Institution Decision, we found Petitioner’s obviousness arguments and evidence lacking. *See* Institution Decision, 20–26. In its Response, Patent Owner adopts our understanding of these designs as set forth in our Institution Decision. *See* PO Resp. 17–19. As explained below, having considered the complete trial record, nothing has changed the conclusion set forth in our Institution Decision.

A visual comparison of Kintec Solution’s product design and Figure 1 of the D’986 patent sufficiently shows that the two designs are quite different. We reproduce the relevant images side-by-side below:

FIG. 1



Ex. 1001, Fig. 1; Ex. 1006, 1. The D'986 patent's Figure 1 is shown above-left and the second image of Kintec Solution is shown above-right. We find several significant differences, which, considering the two designs each as a whole, illustrate that the Kintec Solution design is not basically the same as the claimed design.

The shape of the faceplate portion of the two designs is not the same. The claimed design shows more rounded corners than the Kintec Solution design and the claimed design's face plate has a rounded-beveled edge, while the Kintec Solution's faceplate has straight-sided edges. The dominant button-like features of the claimed design are shown as not only circular, but domed. The buttons of Kintec Solution, conceded by Petitioner to not be circular, also do not appear to be domed as in the claimed design. The claimed design includes a central button-like feature having the same overall elevation as the surrounding four, larger button-like features, but is smaller and has a straighter edged perimeter than the surrounding four buttons. It is unclear what the central-most feature shown in Kintec Solution is, but it does not appear to be a button or button-shaped and is certainly not

shaped like the respective feature of the claimed design. Before even considering the lack of a rectangular hole, we find these difference to be significant enough that Kintec Solution does not show the same basic design or create the same visual impression as the claimed design so as to be a proper primary reference, i.e., a “*Rosen*” reference. *See Apple, Inc., v. Samsung Electronics Co., Ltd.*, 678 F.3d 1314, 1332 (Fed. Cir. 2012) (“The offered designs do not create the same visual impression as Apple’s claimed design and thus do not qualify as primary references.”). Mr. Zhang states that the Kintec Solution device present basically the same visual impression as the claimed design; however, he does not account for the differences we identified above. *See* Ex. 1011 ¶ 46; *see also* Pet. Reply 14–15 (also not substantively addressing these differences). Thus, we are not persuaded by Mr. Zhang’s testimony.

Even were Kintec Solution a proper primary reference, we also find that it would not have been obvious to modify its design to have a rectangular opening like the claimed design, e.g. for a USB plug. Petitioner bases the proposed modification to Kintec Solution’s design on the drawings of Hua-Dali; however, the Hua-Dali design does not position its rectangular opening similarly to the claimed design. Rather than position the rectangular opening along a long-edge of the face plate, so that its configuration *with* the five button-like features is centrally located on the faceplate feature, as claimed, Hua-Dali positions its rectangular opening more along a short-edge of its face plate, which is a 90° rotation of the rectangular opening of the claimed design and along a different side of the operational buttons’ configuration of the claimed design, and not centered as a group. Thus, even were Kintec Solution and Hua-Dali properly combined,

the result would not be the claimed design. We see no reason why it would have been obvious to alter the proposed Kintec Solution-Hua-Dali combination to achieve the claimed design.

In view of the legal standards discussed above, we find Kintec Solution and Hua-Dali would not have rendered the claimed design obvious. Therefore, we find Petitioner has not proven by a preponderance of the evidence that the claim challenged in the Petition is unpatentable under Section 103.

#### IV. CONCLUSION

Petitioner has demonstrated by a preponderance of the evidence that the claim of the D’986 patent is unpatentable under the on-sale bar. In summary, on Petitioner’s unpatentability challenges:<sup>11</sup>

<b>Claims</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/ Basis</b>	<b>Claims Shown Unpatentable</b>	<b>Claims <u>Not</u> Shown Unpatentable</b>
1	102	On-sale bar	1	
1	102	Raffel_sample publication		1
1	103	Kintec Solution, Hua- Dali		1
<b>Overall Outcome</b>			1	

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<sup>11</sup> Should Patent Owner wish to pursue amendment of the challenged claim in a reissue or reexamination proceeding subsequent to the issuance of this decision, see the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, Patent Owner has a continuing obligation to notify the Board in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

ORDER

Accordingly, it is hereby:

ORDERED that Petitioner has demonstrated by a preponderance of the evidence that the sole claim of the D'986 patent is *unpatentable*; and

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

PGR2019-00029  
Patent D821,986 S

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