

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

GUANGZHO EKO TRADING DEVELOPMENT CO., LTD.,

Petitioner,

v.

NINE STARS GROUP (U.S.A.) INC.,

Patent Owner.

Case No. IPR2025-01191

U.S. Patent No. 10,822,165 B2

**PATENT OWNER'S PRELIMINARY RESPONSE TO
PETITION FOR *INTER PARTES* REVIEW
OF UNITED STATES PATENT NO. 10,822,165
PURSUANT TO 35 U.S.C. § 313, 37 C.F.R. § 42.107**

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LISTING OF EXHIBITS

Exhibit	Description
2001	U.S. Patent No. 8,678,219 to Wang et al.

I. Introduction

Patent Owner Nine Stars Group (U.S.A.) Inc. ("Nine Stars" or "Patent Owner") submits this Preliminary Response to demonstrate that the Petition for Inter Partes Review ("Petition" or "Pet.") filed by Guangzho EKO Trading Development Co., Ltd. ("EKO" or "Petitioner") should be denied. The Petition fails to meet the threshold requirements for institution for multiple reasons:

First, the Board should exercise its discretion under 35 U.S.C. § 325(d) to deny institution because Wang presents the same or substantially the same prior art or arguments previously considered by the Office during prosecution.

Second, Petitioner has failed to establish that Wang qualifies as prior art under 35 U.S.C. § 102(a)(1). Critical questions remain regarding Wang's public availability, its relationship to the '165 patent through common inventorship, and potential applicability of the § 102(b)(2)(C) exception for commonly owned subject matter.

Third, Petitioner has not demonstrated a reasonable likelihood of prevailing on any ground of unpatentability. The Petition's anticipation ground fails because Wang does not disclose key claim limitations, including an "automatic" driving arrangement, a cover that "pivotally moves," a "servo motor," a "gear worm sector," and other specific structural features. The obviousness ground similarly fails because it improperly relies on conclusory assertions and the knowledge of a

POSITA without adequate evidentiary support, employing impermissible hindsight reconstruction.

For these reasons, the Board should exercise its discretion to deny institution.

II. The Petition Should Be Denied Under 35 U.S.C. § 325(d) Because the Same or Substantially the Same Prior Art Was Previously Presented to the Office

A. Legal Standard

Under 35 U.S.C. § 325(d), the Director may deny institution of an inter partes review if “the same or substantially the same prior art or arguments previously were presented to the Office.” This provision prevents repetitive challenges based on prior art already considered during examination. *Becton, Dickinson & Co. v. B. Braun Meisung AG*, IPR2017-01586, Paper 8 at 17-18 (PTAB Dec. 15, 2017).

The Board has explained that prior art is "substantially the same" when it discloses the same or similar technical features relevant to the patentability analysis, even if presented in a different context or with minor variations. *See Unified Patents Inc. v. Berman*, IPR2016-01571, Paper 10 at 11-12 (PTAB Dec 14, 2016).

B. The Disclosure of Wang (Ex. 1005) Is Repetitive of Wang ‘219 (Ex. 2001) Previously Considered by the USPTO

The Chinese Utility Model CN203740427U to Wang (Ex. 1005) was cited in the present Petition as allegedly disclosing key limitations of the challenged claims. However, examination of Wang (Ex. 1005) reveals not only key distinctions from the ‘165 Patent, but also that it is substantially the same as a prior art reference already considered during prosecution of the '165 Patent: US 8,678,219 to Wang et al. ("Wang ‘219", Ex. 2001).

1. Common Inventorship and Priority Relationships

Both references—the Disclosure of Wang (Ex. 1005) and Wang ‘219 (Ex. 2001)—share at least on common inventor: Xin Wang. Additionally, the filing dates reveal an apparent sequential relationship:

- **Wang ‘219** (US 8,678,219): Filed December 13, 2012
- **Disclosure of Wang** (CN203740427U): Filed March 19, 2014

Wang (Ex. 1005) was filed approximately 1.3 years after Wang ‘219 (Ex. 2001), suggesting that the Disclosure of Wang (Ex. 1005) represents an incremental development of the same basic technology disclosed in the earlier Wang ‘219 (Ex. 2001).

2. Substantially Similar Technical Disclosures of Wang (Ex. 1005) and Wang '219 (Ex 2001)

A comparison of the technical disclosures confirms that Wang (Ex. 1005) and Wang '219 (Ex. 2001) disclose substantially the same subject matter:

a. Core Structure: Induction Actuated Container with Waterproof Sensing

Both references disclose a container with an automatically actuated lid panel that opens when a sensor detects a user's movement:

- **Disclosure of Wang** (Ex. 1005, Abstract): "waterproof sensing trash can, including an upper can body and a lower can body... a sensing opening-closing apparatus is disposed in an inner cavity formed between the middle body seat and the annular covering housing, the sensing opening-closing apparatus includes a sensor, a circuit board, a battery box, a motor, and a transmission mechanism."
- **Wang '219** (Ex. 2001, Abstract): "A lid operation arrangement of a container includes an automatic operated unit for automatically operating a lid panel, a foot operated unit for manually operating the lid panel, and a motorized unit operatively linked with the automatic operated unit and the foot operated unit."

Both references thus disclose the same fundamental concept: a sensing trash container with a motorized lid that opens automatically when a sensor detects a user.

b. Sensor-Activated Motor Mechanism

Each reference discloses a sensor that detects user approach and triggers a motor to open the lid:

- **Disclosure of Wang** (Ex. 1005, [0004]): "the sensing opening-closing apparatus comprises a sensor, a circuit board, a battery box, a motor, and a transmission mechanism, and the motor is transmission-connected to the sector gear by using the transmission mechanism."
- **Wang '219** (Ex. 2001, col. 1:46-67): "The lid operation arrangement comprises: an automatic operated unit which comprises a sensor supported at the container body for detecting a target movement of a user; a foot operated unit coupled at the container body for generating an upward lifting force to move the lid panel from the closed position to the opened position; and a motorized unit operatively linked with the automatic operated unit and the foot operated unit..."

Both references disclose substantially identical sensor-motor systems for automatic lid actuation.

c. Gear Transmission for Torque Enhancement and Deceleration

Each reference discloses a gear transmission mechanism that provides both torque enhancement (to lift the lid) and hydraulic-like deceleration (to gently lower the lid):

- **Disclosure of Wang** (Ex. 1005, [0005]): "the transmission mechanism is a gear reducer, and the motor is disposed on a rear side of the middle body seat and is transmission-connected to the sector gear by using the gear reducer, to drive the can cover to open and close."
- **Wang '219** (Ex. 2001, col. 2:10-30): "a motorized unit operatively linked with the automatic operated unit and the foot operated unit, wherein when the motorized unit is activated by the sensor, the motorized unit is arranged for generating a torque enhancing force to move the lid panel from the opened position to the closed position and for generating a decelerating force to move the lid panel back to the closed position from the opened position in a hydraulic manner..."

Both references disclose the use of gear reduction to achieve controlled, hydraulic-like movement of the lid panel.

d. Waterproof/Sealed Housing Design

Each reference addresses waterproofing by isolating electrical components from the trash storage area:

- **Disclosure of Wang** (Ex. 1005, [0008]): "A transmission component, a power supply component, and a control component are all wrapped in isolation space, and are completely isolated from a garbage storage portion of the trash can. The trash can has good waterproof, moisture-proof, and corrosion-proof performance..."
- **Wang '219** (Ex. 2001, col. 9:30-45): "It is worth mentioning that the automatic operated unit 30, the foot operated unit 40, the motorized unit 50, and the power supply 60 of the lid operation arrangement are located out of the receiving cavity 11 of the container body 10... the motorized unit 50 and the power supply 60 are supported at the rear and exterior side of the container body 10 and are received in a housing 15 to protect the motorized unit 50 and the power supply 60."

Both references employ substantially the same strategy: isolating electrical/mechanical components in a sealed compartment separate from the waste storage area.

e. Sector Gear Coupled to Lid Panel

Each reference discloses a sector gear connected to the lid panel for pivotal movement:

- **Disclosure of Wang** (Ex. 1005, Claim 1): "one end of the rotating shaft is fixedly connected to a sector gear... and the motor is transmission-connected to the sector gear by using the transmission mechanism."
- **Wang '219** (Ex. 2001, col. 7:50-col. 8:10): "The gear transmission unit 52 comprises an operation gear 521 affixed to the rear edge of the lid panel and a speed adjustable gear set 522 operatively linked between the DC power generator 51 and the operation gear 521... The operation gear 521 is a sector gear defining a center portion coupled at the pivot axle 201 and an arc teething surface..."

While the Disclosure of Wang (Ex 1005) uses slightly different terminology (e.g., "middle body seat" and "annular covering housing" instead of "control housing"), these variations are merely semantic. The underlying technical disclosure is "substantially the same" as that of Wang '219 (Ex. 2001).

Both references also disclose substantially the same mechanical linkage: a sector gear coupled to the lid panel and driven by a motor through a gear reduction system. The Disclosure of Wang (Ex. 1005) does not introduce any new functional

elements, structural arrangements, or operational principles beyond what was disclosed and already considered in Wang '219 (Ex. 2001).

For example:

- Both references disclose a sensor for detecting user approach
- Both references disclose a motor-driven gear system for moving the lid
- Both references disclose deceleration/torque enhancement via gear reduction
- Both references disclose a sector gear coupled to the lid panel
- Both references disclose isolating electronics from the trash compartment to protect them from waste

The Disclosure of Wang (Ex. 1005) is thus "substantially the same" as Wang '219 (Ex. 2001) for purposes of 35 U.S.C. § 325(d).

3. The Disclosure of the '165 Patent is Not Identical to and Distinguishable From Wang (Ex. 1005)

The '165 patent also shares at least one common inventor (Xin Wang) and the filing dates show an apparent sequential relationship, with Wang (Ex. 1005) and Wang '219:

- **Wang '219** (Ex. 2001) (US 8,678,219): Filed December 13, 2012
- **Wang** (Ex. 1005) (CN203740427U): Filed March 19, 2014

- **‘165 Patent** (Ex. 1001): Filed January 30, 2018 (priority to September 20, 2016)

Despite these connections and relationships, the ‘165 Patent discloses and claims technical and patentable elements that are distinguishable from and not identical to not only Wang (Ex. 1005), but also Wang ‘219 as was determined during prosecution.

The New Matter Incorporated in the ‘165 Patent includes at least:

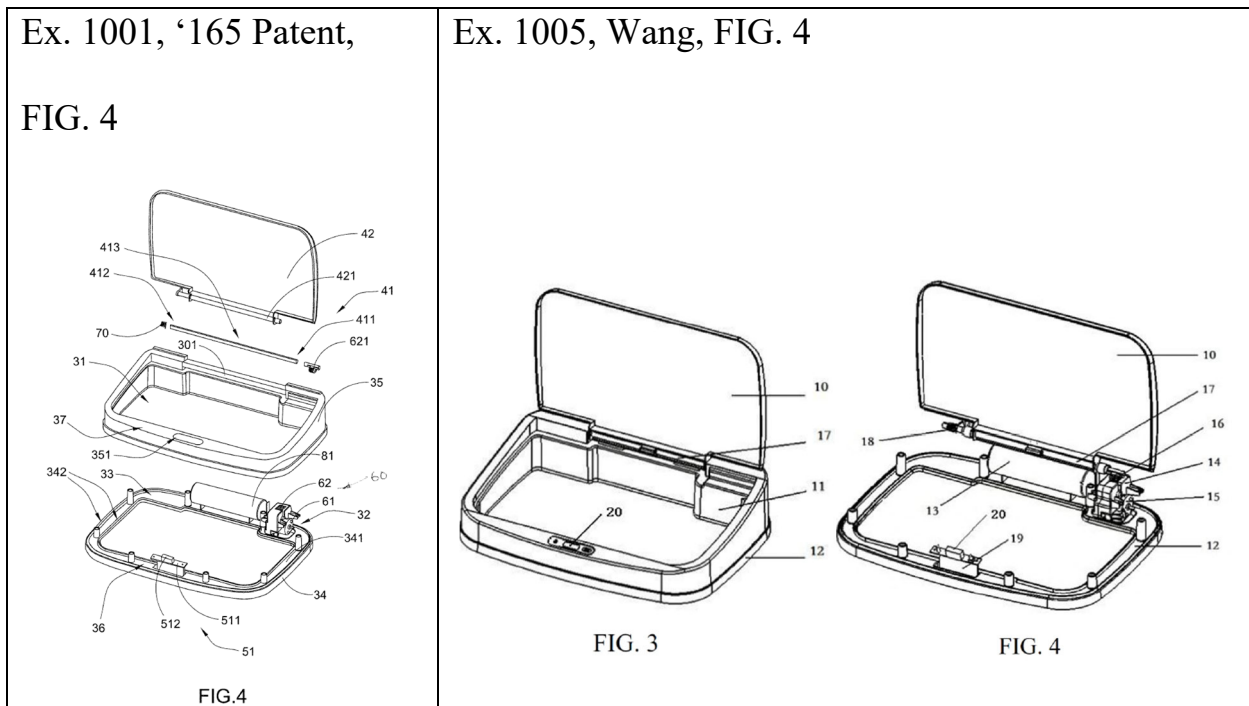
- “...wherein said control housing has first and second side concealed compartments formed at a rear portion of said control housing, and a cover opening formed between said first and second side concealed compartments to communicate with said storage cavity of said container body...” and “...a pivot shaft having first and second end portions extended into said first and second side concealed compartments respectively...” and “...an actuation unit concealed in said first side concealed compartment of said control housing in a waterproof manner to operatively link with said sensor unit and to operatively coupled to said pivot shaft...” and “...an element arranged to initially push up said cover panel simultaneously when said cover panel is started to move from said closed position and partially offsetting a weight of said cover panel when said cover panel is

started to move from said opened position.” (Ex 1001 – ‘165 Patent, Claim 1);

- “...a gear worm sector affixed at said first end portion of said pivot shaft to operatively coupled with said servo motor.” (Ex 1001 – ‘165 Patent, Claim 3);
- “...wherein said control housing has a trapezoid cross section that a height of said front portion of said control housing is shorter than that of said rear portion thereof to maximize a size of each of said first and second side concealed compartments.” (Ex 1001 – ‘165 Patent, Claims 6, 8, 14);
- “...a resilient element concealed in said second side concealed compartment of said control housing and coupled at said second end portion of said pivot shaft to apply an urging force as an initial force towards said cover panel for initially pushing up said cover panel simultaneously when said cover panel is started to move from said closed position and as a weight supporting force for partially offsetting a weight of said cover panel when said cover panel is started to move from said opened position.” (Ex 1001 – ‘165 Patent, Claims 9, 12, 15); and

- “...a shaft sleeve formed along a folding edge thereof, wherein an exposed portion of said pivot shaft between said two end portions thereof is received in said shaft sleeve to conceal said exposed portion of said pivot shaft so as to prevent said pivot shaft from exposing to said container opening of said container body...” (Ex 1001 – ‘165 Patent, Claims 17, 19, 21).

Each of the foregoing features are illustrated in the drawings of the ‘165 Patent, particularly in FIGs. 4, 7, and 8, and corresponding Figures of Wang (Ex. 1005), as follows:



Ex. 1001, '165 Patent,

FIG. 7

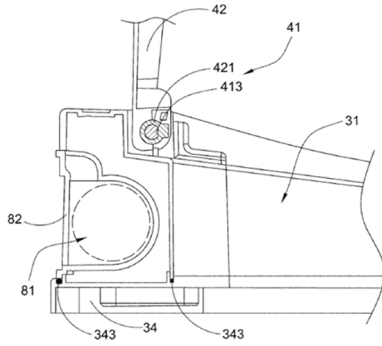


FIG.7

Ex. 1005, Wang, FIG. 7

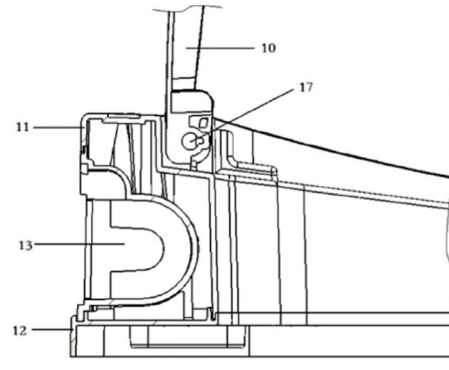


FIG. 7

Ex. 1001, '165 Patent,

FIG. 8

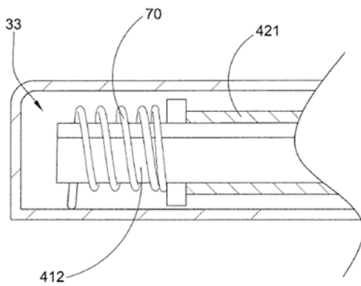


FIG.8

Ex. 1005, Wang,

(No Corresponding Figure)

Wang (Ex. 1005) does not disclose these technical and patentable elements that distinguished the claims of the '165 Patent from Wang '219 (Ex. 2001) during examination thereof. In particular, Wang (Ex. 1005) does not disclose at least the following elements:

- first and second side concealed compartments, with first and second ends of the pivot shaft extending into the first and second side concealed compartments;
- an element to initially push up the cover panel simultaneously when the cover panel starts to move from a closed position and offsetting a weight of the cover panel;
- a gear worm sector affixed to a first end portion of the pivot shaft;
- the control housing having a trapezoidal cross-section to maximize the size of each of the first and second side concealed compartments;
- a resilient element in the second side concealed compartment and coupled to the second end portion of the pivot shaft to apply an urging force for initially pushing up the cover panel simultaneously when the cover panel is started to move from the closed position; and
- a shaft sleeve formed along a folding edge of the cover panel receiving an exposed portion of the pivot shaft between the two end portions thereof, to prevent the pivot shaft from being exposed to the container opening.

The foregoing differences in the disclosures and the drawings establish that the '165 Patent is distinguishable from and not identical to Wang (Ex. 1005).

C. Wang ‘219 Was Previously Presented to and Considered by the USPTO

The prosecution history of the '165 Patent and its parent application (the ‘154 Patent) confirms that Wang ‘219 were cited during examination:

- Wang ‘219 (US 8,678,219) was considered by the examiner on or about September 6, 2017 (Ex. 1002 – Notice of References Cited, p. 69)
- The Examiner expressly considered cited Wang ‘219 in the Office Action mailed September 6, 2017 (Ex. 1002 – Office Action, pp. 56-66)

Because Wang ‘219 (Ex. 2001) were already before the USPTO, and because the Disclosure of Wang (Ex. 1005) is substantially the same as Wang ‘219 (Ex. 2001), the present Petition is based on "the same or substantially the same prior art" previously considered by the Office. Accordingly, institution should be denied under 35 U.S.C. § 325(d).

D. Conclusion on Section 325(d)

The Disclosure of Wang (Ex. 1005) presents no new technical teaching beyond what was already disclosed in Wang ‘219 (Ex. 2001), both of which were considered during prosecution. The references share common inventorship, disclose substantially identical structures and functions, and employ the same waterproofing strategies. Under 35 U.S.C. § 325(d), institution should therefore be

denied because the Petition relies on prior art that is substantially the same as prior art previously presented to the Office.

III. The Petition Fails To Establish That Wang (Ex. 1005) Is Prior Art

Even if the Board declines to exercise discretion under § 325(d), the Petition fails to establish that Wang qualifies as prior art. Petitioner bears the burden of proving that Wang is available as prior art by a preponderance of the evidence.

Dynamic Drinkware, LLC v. Nat'l Graphics, Inc., 800 F.3d 1375, 1379 (Fed. Cir. 2015).

A. Legal Standard for Prior Art Under 35 U.S.C. § 102(a)(1)

To qualify as prior art under 35 U.S.C. § 102(a)(1), Wang must have been "patented, described in a printed publication, or 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) (emphasis added).

The effective filing date is critical. The '165 patent:

- Was filed January 30, 2018
- Claims priority to an application filed September 20, 2016
- Does not claim foreign priority on its face

Ex. 1001, cover; Ex. 1002 at 3 (application data sheet disclaiming foreign priority).

For Wang to be prior art, it must have been "available to the public" **before September 20, 2016** (assuming the earlier priority date applies).

B. Wang's Status as a "Printed Publication" Is Not Established

Petitioner asserts that Wang "published" on July 30, 2014. Pet. at 12. However, the evidence provided is insufficient to establish that Wang was "available to the public" as a printed publication.

1. Publication Date Versus Public Availability

Under Federal Circuit precedent, a reference is only a "printed publication" if it was "sufficiently accessible to the public interested in the art" before the critical date. *In re Hall*, 781 F.2d 897, 899 (Fed. Cir. 1986). The date appearing on a document does not conclusively establish public availability. *See Medtronic, Inc. v. Barry*, 891 F.3d 1368, 1380-81 (Fed. Cir. 2018).

For foreign patent documents, the burden is on the petitioner to establish:

- That the document was actually published on the stated date
- That the document was publicly accessible as of that date
- The circumstances of public availability

Blue Calypso, LLC v. Groupon, Inc., 815 F.3d 1331, 1348-49 (Fed. Cir. 2016).

2. Insufficient Evidence of Public Availability

Here, Petitioner has provided:

- A copy of the Chinese utility model document (Ex. 1004)

- A certified translation (Ex. 1005)

What Petitioner has NOT provided:

- Evidence that Chinese utility model patents are systematically published and made publicly accessible
- Evidence of the Chinese Patent Office's publication procedures as of July 2014
- Evidence that Wang was actually indexed, catalogued, or made available in a searchable database
- Evidence that persons interested in the art could actually access Wang as of July 2014
- Expert testimony regarding Chinese patent publication practices

Chinese utility models follow a different examination process than U.S. patents. Without evidence establishing the public availability of Chinese utility models as of July 2014, Petitioner has not met its burden.

The Board has held that a petitioner must provide "evidence that establishes public availability" and "cannot rely on the date printed on the face of the document alone." *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 19-20 (PTAB Dec. 20, 2019).

Petitioner has failed to provide such evidence.

IV. The Petition Fails To Demonstrate A Reasonable Likelihood Of Prevailing

Even if Wang were available as prior art (which Patent Owner disputes), Petitioner has failed to demonstrate a reasonable likelihood of prevailing on either ground of unpatentability. To meet its burden, Petitioner must show, by a preponderance of evidence, that at least one claim is unpatentable. 35 U.S.C. § 314(a); *Cuozzo Speed Technologies v. Commerce for Intellectual Property*, 579 U.S. 261, 136 S. Ct. 2131, 2144 (2016).

A. Ground 1: Wang (Ex. 1005) Does Not Anticipate the Claims

Anticipation requires that "each and every limitation" of a claim be found in a single prior art reference, arranged as in the claim. *Net MoneyIN, Inc. v. VeSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008). The Petition's anticipation analysis fails to establish that Wang discloses numerous key claim limitations.

1. Claim 1: "Automatic" Driving Arrangement

Claim 1 requires "an automatic driving arrangement." Ex. 1001, 10:60 (emphasis added).

Wang (Ex. 1005) does not explicitly describe its driving arrangement as "automatic."

The Petition argues that Wang (Ex. 1005) discloses an "automatic" arrangement because:

- Wang is directed to "[i]ntelligent [a]utomatic" trash cans (Pet. at 52, citing Wang [0002])
- Wang describes a "sensing trash can" (Pet. at 52)

This argument fails for multiple reasons.

a. Background Sections Describe Prior Art, Not the Invention

Wang's (Ex. 1005) reference to "[i]ntelligent [a]utomatic" trash cans appears in paragraph [0002], which is part of the "Background" section describing prior art problems. Wang [0002] states:

"At present, most intelligent automatic flip garbage cans on the market have the following defects..."

This describes existing prior art trash cans, not Wang's invention. Statements in a specification about what may be found in the prior art do not mean that those same statements are part of the described invention.

b. Wang (Ex. 1005) Never Describes Its Own Driving Arrangement as "Automatic"

In describing its own invention, Wang uses terms such as:

- "Sensing opening-closing apparatus" (Wang [0004], [0018])
- "Transmission mechanism" (Wang [0021])
- "Motor" that "drives" the cover (Wang [0020], [0023])

Wang (Ex. 1005) never uses the word "automatic" to describe its driving arrangement. While Wang's (Ex. 1005) mechanism is sensor-triggered, sensor triggering is not synonymous with automatic operation.

The term "automatic" in the context of the claims means operating without human intervention or control beyond initial setup. A sensor-triggered mechanism may require:

- Precise hand placement at a specific distance and angle
- Deliberate user action to trigger the sensor
- Multiple attempts if the sensor fails to detect motion

These characteristics are inconsistent with truly "automatic" operation.

2. Claim 1: Cover "Pivotally Move[s]" Between Positions

Claim 1 requires that the cover panel be "pivotally mounted to said control housing via said pivot shaft to pivotally move between a closed position ... and an opened position." Ex. 1001, 11:13-21 (emphasis added).

The Petition argues that because Wang's cover is "hinged," it therefore "pivotally moves." Pet. at 52-53. This argument impermissibly conflates different mechanical concepts.

a. "Hinged" Does Not Necessarily Mean "Pivotally Moving"

Wang states that its cover is "hinged to the annular covering housing ... using a rotating shaft." Wang [0004], [0018]. However:

- **A hinge is a general term** for any mechanism that allows two objects to rotate relative to each other
- **Hinges can operate in various ways:** pivoting, sliding, folding, or combinations thereof
- **Not all hinged connections involve pivotal movement** in the sense required by the claims

The claims specifically require that the cover "pivotally move" via the pivot shaft. This language requires:

1. **Rotational movement** around the longitudinal axis of the pivot shaft
2. **The pivot shaft serving as the axis of rotation**
3. **The cover panel rotating in an arc** as the shaft rotates

b. Wang Does Not Explicitly Describe This Type of Movement

While Wang's figures may depict what appears to be rotational movement, Wang's written description does not explicitly describe the cover as rotating around the shaft axis. Wang describes:

- The shaft being "fixedly connected under the can cover" (Wang [0004], [0018])
- The cover being "hinged" (Wang [0004], [0018])
- The cover being "driven to open" (Wang [0023])

None of these descriptions explicitly teaches "pivotally moving" in the manner claimed. Various hinge mechanisms could be used that do not involve true pivotal movement:

- **Slide-and-lift hinges** where the cover slides along the shaft before rotating
- **Multi-axis hinges** where movement occurs around multiple points
- **Compound hinges** combining sliding and rotational motion

c. Petitioner's Obviousness Argument Undermines Its Anticipation Argument

Significantly, Petitioner's brief presents an alternative obviousness argument specifically addressing the "pivotally moving" limitation. Pet. at 52-53. The very existence of this alternative ground implicitly concedes that Wang does not expressly disclose pivotal movement.

d. No Expert Analysis Supports Anticipation

The Visser declaration addresses "pivotally moving" only in the context of the obviousness argument (Ex. 1006, ¶¶ 137-143), not in the context of anticipation. This further confirms that even Petitioner's own expert does not believe Wang expressly discloses this limitation.

Wang does not anticipate the "pivotally move" limitation of claim 1.

3. Claim 2: "Servo Motor"

Claim 2 requires that "said actuation unit comprises a servo motor." (Ex. 1001, 11:23-28) (emphasis added).

The Petition explicitly admits that "Wang does not label its motor 15 as a 'servo' motor." Pet. at 34. This admission is fatal to the anticipation ground for claim 2 and all claims depending therefrom.

a. Anticipation Requires Express or Inherent Disclosure

To anticipate, a prior art reference must disclose every claim limitation, either expressly or inherently. *Schering Corp. v. Geneva Pharmaceuticals*, 339 F.3d 1373, 1377 (Fed. Cir. 2003). Inherent anticipation requires that the undisclosed limitation is "necessarily present," not merely probably or possibly present. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999).

Wang's motor 15 is described only as "a motor." Wang [0018], [0020]. There is no disclosure that it is a servo motor, and Petitioner provides no evidence that motor 15 necessarily possesses servo characteristics.

b. Visual Similarity in Drawings Is Insufficient

The Petition argues that Wang's motor 15 and the '165 patent's motor 61 are "structurally indistinguishable" based on comparing Figures 5 of each reference. Pet. at 34-35.

This argument is legally and factually flawed:

Legally: Patent drawings are not drawn to scale and do not accurately represent structural details unless explicitly stated. *See Hockerson-Halberstadt, Inc. v. Avia Grp. Int'l, Inc.*, 222 F.3d 951, 956 (Fed. Cir. 2000) ("[I]t is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue.").

Factually: The drawings in Wang and the '165 patent show basic motor outlines but reveal nothing about internal mechanisms, control systems, or operational characteristics.

c. Servo Motors Have Specific Technical Characteristics

A servo motor is not merely "a motor." Servo motors are distinguished by:

- **Closed-loop control systems with feedback** (encoders, resolvers, or tachometers)
- **Precise position, velocity, or torque control**
- **Real-time error correction** based on feedback signals
- **Specific controller circuits** to process feedback

Petitioner's own expert acknowledges these features. Ex. 1006, ¶¶ 151-153.

Wang discloses none of these characteristics. Wang describes only:

- "A motor 15" (Wang [0018], [0020])
- A "circuit board 19" (Wang [0018])

- A "transmission mechanism" (Wang [0018], [0021])

There is no disclosure of:

- Feedback mechanisms
- Position sensing
- Closed-loop control
- Error correction
- Servo control circuits

Without these features, motor 15 cannot be a servo motor.

d. The Petition's Reliance on Functional Similarity Fails

The Petition argues that Wang's motor and the '165 patent's motor "describe the operation of this motor in the same way." Pet. at 35. Specifically, both motors "rotate" to "drive" a cover via a gear transmission. *Id.*

This argument confuses basic functional similarity with structural identity.

Many types of motors can rotate and drive mechanisms through gears:

- **Stepper motors** (precise positioning without feedback)
- **DC brush motors** (simple, low-cost rotation)
- **DC brushless motors** (efficient, electronically commutated)
- **Servo motors** (closed-loop control with feedback)
- **AC induction motors** (robust, constant speed)

All of these motors can "rotate" and "drive" a shaft through a gear transmission. The fact that Wang's motor rotates and drives a shaft does not mean it is a servo motor.

Anticipation requires disclosure of the specific claimed structure, not merely similar function. *Atlas Powder Co. v. E.I. du Pont De Nemours & Co.*, 750 F.2d 1569, 1573 (Fed. Cir. 1984).

e. Petitioner's Obviousness Ground Concedes Lack of Anticipation

Once again, the Petition presents an alternative obviousness argument for the "servo motor" limitation (Pet. at 53-55), which implicitly acknowledges that Wang does not expressly disclose this limitation.

Wang does not anticipate claim 2 or any of its dependent claims (3-15). This alone defeats anticipation of claims 2-15.

4. Claim 3: "Gear Worm Sector"

Claim 3 requires that "said gear transmission unit comprises a gear worm sector affixed at said first end portion of said pivot shaft." Ex. 1001, 11:30-32 (emphasis added).

Wang does not use the term "gear worm sector" or "worm gear."

a. "Sector Gear" Is a Generic Term

Wang describes "a sector gear 6" (or "sector gear 16" in some paragraphs). Wang [0018], [0020]. However:

- **"Sector gear" is a generic term** referring to any gear that is a partial segment (sector) of a full circular gear
- **Sector gears come in many varieties:** spur sector gears, helical sector gears, bevel sector gears, and **worm sector gears**
- **A worm sector gear is a specific type** characterized by helical threads designed to engage with a worm

b. Worm Gear Sectors Have Distinct Structural Characteristics

A "gear worm sector" (or "worm gear sector") has specific structural features:

- **Helical or spiral thread pattern** on the gear teeth
- **Angled tooth engagement** (typically 90 degrees to the worm axis)
- **Specific tooth profile** designed to mesh with a worm's helical thread
- **Self-locking capability** in many configurations (preventing back-driving)

The '165 patent specifically identifies its gear as a "gear worm sector 621."

Ex. 1001, 7:38-41, Fig. 5. This specific terminology indicates a particular type of sector gear, not just any sector gear.

c. Wang Does Not Disclose Worm Gear Characteristics

Wang describes:

- "A sector gear 6 [or 16]" (Wang [0018])

- "Transmission-connected" to a motor via a "transmission mechanism"
(Wang [0018], [0020])
- Used in a "gear transmission" (Wang [0021])

Wang does not describe:

- Helical or spiral threads
- Worm engagement
- Self-locking features
- Specific tooth profiles for worm meshing
- A worm gear as part of the transmission

d. Wang's Figures Are Inconclusive

While Wang's Figure 5 shows a sector gear, the figure does not clearly depict whether it is a worm sector gear or another type of sector gear. Patent drawings, particularly in utility models, often lack the detail necessary to distinguish between different gear types.

e. Petitioner Presents an Alternative Obviousness Argument

The Petition again presents an obviousness argument for the "gear worm sector" limitation (Pet. at 55-57), further confirming that Wang does not expressly disclose this feature.

Wang does not anticipate claim 3 or any of its dependent claims (4-9). This defeats anticipation of claims 3-9.

5. Claim 4: Movement "In a Hydraulic Manner"

Claim 4 requires moving the cover panel "in a hydraulic manner." Ex. 1001, 11:42-43 (emphasis added).

Wang never uses the term "hydraulic" or describes hydraulic operation.

a. "Hydraulic Manner" Has Specific Meaning

The claim term "in a hydraulic manner" refers to smooth, controlled, fluid-like movement achieved through mechanical means. The '165 patent explains that the gear transmission unit provides "decelerating and torque enhancing force in a stable and controllable manner." Ex. 1001, 7:17-21.

This terminology derives from hydraulic systems, which provide:

- **Smooth, constant-velocity movement**
- **Dampened operation** (no jerking or sudden acceleration)
- **Force multiplication** through mechanical advantage
- **Controlled speed** regardless of load variations

b. Wang Does Not Describe "Hydraulic Manner" Operation

Wang describes its transmission mechanism as providing:

- "Stable transmission" (Ex. 1005, p. 4, Wang [0021])
- "Reliable operation" (Ex. 1005, p. 4, Wang [0021])
- "Speed reduction" (Ex. 1005, p. 4, Wang [0023])

While these descriptions suggest controlled operation, they do not describe "hydraulic manner" movement. Many transmission systems provide stable, reliable operation without operating "in a hydraulic manner."

c. The Petition's Argument Is Speculative

The Petition argues that Wang's "gear reducer 14" achieves a "hydraulic" effect by reducing speed and increasing torque. Pet. at 57. However:

- This is argument and inference, not disclosure
- Wang never describes the movement as "hydraulic" in any way
- Speed reduction alone does not create "hydraulic manner" movement

Anticipation requires disclosure in the prior art, not mere argument about what the prior art might achieve. *In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1349 (Fed. Cir. 2002).

Wang does not disclose "hydraulic" manner movement. This defeats anticipation of claim 4.

6. Claims 5, 7, 10-11, 13-24: Additional Missing Disclosures

The Petition's anticipation analysis suffers from additional deficiencies for dependent claims:

a. "Detachably Coupled" Battery Compartment Cover (Claims 7, 16, 23)

These claims require "a battery compartment cover detachably coupled at a rear wall of said control housing." Ex. 1001, 12:4-10 (emphasis added).

While Wang's Figure 6 depicts what appears to be a battery box with a cover, Wang never describes the cover as "detachably coupled" or explains the coupling mechanism. Wang states only that there is "an opening" on the battery box. (Ex. 1005, p. 4, Wang [0020]).

The Petition argues that the cover "must" be detachable to allow battery replacement. Pet. at 41-43. This is inference, not disclosure. Anticipation requires that the limitation be disclosed, not merely that it would be necessary or desirable. *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991).

Moreover, batteries can be accessed through various mechanisms:

- Permanently attached hinged covers
- Sliding access panels
- Removable bottom panels
- Access through disassembly of the main housing

Without explicit disclosure that the cover is "detachably coupled," anticipation fails.

**b. "Corresponding" Non-Circular Cross Sections
(Claims 18, 20, 22)**

These claims require that "said exposed portion of said pivot shaft has a non-circular cross section and said shaft sleeve has a corresponding non-circular cross section to fit said exposed portion." Ex. 1001, 12:57-61 (emphasis added).

The term "corresponding" requires that the shaft and sleeve cross-sections match or complement each other such that they fit together. Multiple configurations can "correspond":

- **Matching shapes** (both hexagonal, both square, both D-shaped, etc.)
- **Mating surfaces** that engage to prevent relative rotation
- **Coordinated design** for torque transmission

While Wang's Figure 7 may show non-circular cross-sections, Wang never describes these cross-sections as "corresponding" in the sense of matching or complementary. Wang states only that the shaft is "fixedly connected under the can cover." (Ex. 1005, p. 4, Wang [0018]).

Without explicit disclosure of "corresponding" cross-sections designed to fit together, anticipation fails.

c. Front Concealed Compartment with Slanted Front Wall (Claims 10, 13, 24)

These claims require "a front concealed compartment defining a slanted front wall, wherein said sensor unit comprises sensor circuit board concealed in said front concealed compartment and a sensor supported at said slanted front wall." (Ex. 1001, 12:24-29) (emphasis added).

The Petition argues that Wang's "front concealed compartment" has a "slanted front wall" because the back of Wang's housing is taller than the front. Pet. at 44-47.

However, Wang never identifies or describes a "front concealed compartment" as a distinct structural element. Wang describes:

- "Inner cavities" in general (Ex. 1005, p. 4, Wang [0018])
- A sensor "disposed on a front side of the middle body seat" (Ex. 1005, p. 4, Wang [0019])
- A "mounting hole" allowing the sensor to extend out (Ex. 1005, pp. 3-4, Wang [0006], [0019])

Wang does not identify:

- A specific "front concealed compartment" as distinguished from side compartments
- A "slanted front wall" of such a compartment
- The sensor being "supported at" such a slanted front wall

The Petition's analysis improperly reads limitations into Wang based on visual inspection of the figures rather than the written disclosure. This is insufficient for anticipation.

d. Shaft Sleeve at Folding Edge (Claims 17, 19, 21)

These claims require "a shaft sleeve formed along a folding edge" of the cover panel, "wherein an exposed portion of said pivot shaft between said two end portions thereof is received in said shaft sleeve." (Ex. 1001, 12:41-47) (emphasis added).

While Wang's figures appear to show some structure at the edge of the cover where the shaft connects, Wang never describes a "shaft sleeve" or explains that the shaft is "received in" such a sleeve.

Wang states only that the shaft is "fixedly connected under the can cover." (Ex. 1005, p. 4, Wang [0018]). This generic description does not necessarily disclose a "shaft sleeve" structure as claimed.

Wang does not anticipate claims 7, 10-11, 13-24 due to these missing disclosures.

7. Summary of Anticipation Analysis

The Petition fails to establish anticipation of any of claims 1-24 because Wang lacks express disclosure of multiple key limitations:

Claim(s)	Missing Limitation(s)
1	"Automatic" driving arrangement; "pivotally move"
2-15	"Servo motor"
3-9	"Gear worm sector"
4	"Hydraulic manner"
7, 16, 23	"Detachably coupled" battery cover
10, 13, 24	Front concealed compartment with "slanted front wall"

Claim(s)	Missing Limitation(s)
17, 19, 21	"Shaft sleeve" at folding edge
18, 20, 22	"Corresponding" non-circular cross sections

The Petition repeatedly acknowledges these missing disclosures and attempts to cure them through:

- Inferences from figures
- Attorney argument
- References to the background section (describing prior art, not Wang)
- Claims that features "must" be present
- Alternative obviousness arguments

None of these approaches satisfies the requirements for anticipation. Ground 1 should be denied.

B. Ground 2: Wang Does Not Render the Claims Obvious

Even if Wang disclosed all claim limitations (which it does not), the Petition fails to establish obviousness because it:

1. Relies on conclusory assertions of "common knowledge" without evidentiary support
2. Employs impermissible hindsight reasoning
3. Provides inadequate expert analysis
4. Fails to articulate any motivation to modify Wang

5. Ignores secondary considerations of non-obviousness

1. Legal Standard for Obviousness

To establish obviousness, a petitioner must demonstrate that a POSITA would have had reason to combine or modify prior art teachings to arrive at the claimed invention. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

Conclusory statements are insufficient; there must be "articulated reasoning with some rational underpinning." *Id.*

The Federal Circuit has repeatedly emphasized that bare invocations of "common sense" or "ordinary skill" do not satisfy this requirement without specific evidentiary support. *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1361-62 (Fed. Cir. 2016).

Moreover, the analysis must avoid hindsight reconstruction. The question is not whether the claimed invention would have been obvious in light of the teaching of the prior art and the claimed invention itself, but whether it would have been obvious in light of the prior art alone. *In re McLaughlin*, 443 F.2d 1392, 1395 (CCPA 1971).

2. The Petition Relies on Conclusory Assertions

The Petition's obviousness analysis consists primarily of bare assertions that modifications would have been "obvious" without explaining why a POSITA would have made them:

a. "Automatic" Driving Arrangement

The Petition argues:

"A POSITA would have readily understood that Wang's trashcan includes the 'automatic' 'driving arrangement' required by claim 1." Pet. at 52.

This is a conclusion, not an analysis. The Petition provides no evidence that:

- POSITAs understood "automatic" to mean sensor-triggered
- Wang's background reference to prior art "automatic" cans is relevant to Wang's invention
- A POSITA would have understood Wang to teach automatic operation despite Wang never using that term

b. "Pivotally Moving" Cover

The Petition argues:

"A POSITA would have understood that by describing its cover as 'hinged,' Wang is referring to a cover that pivots (or rotates) along with rotating shaft 17." Pet. at 53; Ex. 1006, ¶¶ 137-143.

Again, this is conclusory. The Petition does not explain:

- Why "hinged" necessarily means "pivotally moving"
- What evidence supports this interpretation
- Why alternative hinge mechanisms would not work

The Visser declaration simply asserts that a POSITA "would have understood" this, without explaining the basis for that understanding. Ex. 1006, ¶¶ 137-143. This is insufficient.

c. "Servo Motor"

The Petition argues that using a servo motor would have been obvious because:

- Servo motors were "known and available" (Pet. at 53-54)
- Servo motors were "routinely used" in trash cans (Pet. at 54)
- Use would be "nothing more than a routine, obvious design choice" (Pet. at 55)

Each of these assertions is inadequately supported:

"Known and available": The Petition cites four references (Exs. 1007-1010) showing servo motors in various contexts. Pet. at 54. However:

- None shows a servo motor in Wang's specific configuration
- None explains why a POSITA would use a servo motor instead of Wang's disclosed motor
- Mere availability does not establish obviousness, *See In re Fulton*, 391 F.3d 1195, 1200 (Fed. Cir. 2004).

"Routinely used": The Petition cites references showing servo motors in trash can applications. Pet. at 54. However:

- These references show different trash can configurations
- None suggests using a servo motor in Wang's specific structure
- "Routine use" in one context does not make use in a different context obvious

"Design choice": The Petition asserts that selecting a servo motor would be an "obvious design choice." Pet. at 55. However:

- Design choice rationales require that all options were equally suitable.
- The Petition provides no such evidence
- Different motor types have different characteristics (cost, complexity, power consumption, control requirements) that make them not equally suitable

d. "Gear Worm Sector"

Similarly, the Petition argues that using a worm gear sector would have been obvious because:

- Worm gear sectors were "known" (Pet. at 55-56)
- They were used in trash can applications (Pet. at 56)
- Use would be an "obvious design choice" (Pet. at 57)

These assertions suffer from the same deficiencies:

- The cited references (Exs. 1011-1012) show worm gears in different contexts

- No explanation why a POSITA would use a worm gear sector in Wang's configuration
- No evidence that worm gear sectors and other sector gear types are equally suitable (they are not—worm gears provide different reduction ratios, efficiency, and self-locking properties)

3. The Petition Employs Impermissible Hindsight

The Petition's obviousness analysis works backward from the claimed invention rather than forward from the prior art:

a. Modifications Are Motivated by the Claimed Invention

The Petition argues that using a servo motor would "improve" Wang's operation by providing:

- "Excellent operational accuracy" (Ex. 1006, ¶¶ 151-153)
- "Repeatability over time" (*Id.*)
- "Energy efficiency" (Ex. 1006, ¶¶ 158-161)

These "improvements" are the benefits of the claimed invention. There is no evidence that:

- Wang identified problems with accuracy, repeatability, or efficiency
- A POSITA would have recognized these as problems needing solution
- A POSITA would have looked to servo motors to solve them

This is classic hindsight reconstruction. *See Cheese Sys., Inc. v. Tetra Pak Cheese & Powder Sys., Inc.*, 725 F.3d 1341, 1352 (Fed. Cir. 2013).

b. The Petition Assumes the Goal Was to Reach the Claimed Invention

Throughout the obviousness analysis, the Petition assumes that the goal was to arrive at the claimed invention:

"A POSITA would have recognized that use of a servo motor would have improved Wang's trashcan." Pet. at 54 (emphasis added).

But why would a POSITA seek to "improve" Wang in this specific way? Wang does not identify any problems requiring these specific improvements. The Petition does not point to any teaching in Wang or the knowledge of a POSITA that would motivate these changes.

The only reason to make these modifications is to arrive at the claimed invention—which is impermissible hindsight.

4. The Expert Declaration Provides Inadequate Analysis

The Visser declaration (Ex. 1006) fails to provide the detailed technical analysis necessary to support an obviousness finding:

a. Servo Motor Analysis (Ex. 1006, ¶¶ 144-161)

The declaration states that servo motors:

- Were "known and available" (Ex. 1006, ¶¶ 144-148)
- Were used in similar applications (Ex. 1006, ¶¶ 144-148)

- Would provide certain benefits (Ex. 1006, ¶¶ 150-161)

What the declaration does NOT explain:

- Why a POSITA would have considered Wang's motor inadequate
- What specific problem would motivate using a servo motor
- Whether a servo motor would be compatible with Wang's structure
- What modifications would be needed to implement a servo motor
- Whether there would be any tradeoffs or disadvantages

This level of analysis is insufficient. Expert declarations must provide "detailed analysis" and "reasoned explanation," not mere conclusions. *Nintendo Co. v. Genuine Enabling Tech. LLC*, IPR2018-00542, Paper 7 at 26 (PTAB Aug 6, 2018).

b. Worm Gear Sector Analysis (Ex. 1006, ¶¶ 162-173)

Similarly, the declaration's analysis of worm gear sectors is conclusory:

- States they were "known" (Ex. 1006, ¶¶ 162-170)
- States they were used in trash cans (Ex. 1006, ¶¶ 162-170)
- Concludes use would be a "design choice" (Ex. 1006, ¶¶ 171-173)

What the declaration does NOT explain:

- The specific advantages of worm gear sectors over other sector gear types

- Why a POSITA would select a worm gear sector for Wang's application
- Whether Wang's transmission mechanism is compatible with a worm gear sector
- What the tradeoffs would be (worm gears typically have lower efficiency and higher friction)

c. Other Limitations

For the remaining obviousness arguments (hydraulic manner, detachably coupled cover, corresponding cross-sections), the declaration provides even less analysis—often only 2-3 paragraphs of conclusory statements. (Ex. 1006, ¶¶ 174-200).

This is insufficient under Board precedent. *See Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 at 15-17 (PTAB Aug 24, 2022) (finding expert declaration insufficient where it provided only conclusory statements).

5. No Articulated Motivation to Modify Wang

The fundamental flaw in the Petition's obviousness analysis is the complete absence of any articulated reason why a POSITA would modify Wang as proposed.

The Petition does not identify:

- Any problem with Wang that would motivate modification

- Any teaching in Wang suggesting these modifications
- Any teaching in the background knowledge of a POSITA suggesting these modifications
- Any advantage that would be recognized before making the modifications

Instead, the Petition relies on formulaic statements:

- "Were available" (Pet. at 53-57)
- "Were known" (Pet. at 55-57)
- "Would have recognized" (Pet. at 54-57)
- "Would have understood" (Pet. at 52-59)

These are not reasons to modify Wang. *KSR* requires "some articulated reasoning with some rational underpinning." *KSR*, 550 U.S. at 418. The Petition provides none.

6. The Petition Ignores Secondary Considerations

Finally, the Petition completely ignores secondary considerations of non-obviousness. Patent Owner is prepared to present evidence of:

a. Commercial Success

Products embodying the '165 patent have achieved significant commercial success in the marketplace. This success is directly tied to the claimed features, particularly:

- The waterproof concealed compartments protecting electronic components
- The specific structural arrangement providing reliable operation
- The coordinated design of the actuation unit and pivot shaft

b. Long-Felt Need

Prior to the '165 patent, the industry struggled with trash can designs that suffered from:

- Water and moisture damage to electronic components
- Corrosion of mechanical parts from garbage gases
- Reliability issues and short product lifespan

The '165 patent's solution—concealing all electronic and mechanical components in waterproof compartments—addresses this long-felt need.

c. Industry Praise

The '165 patent's design has received recognition and praise from industry participants, including product reviews, awards, and commentary highlighting the innovative structural arrangement.

d. Copying

Petitioner itself has copied the patented design, as evidenced by the parallel litigation. This copying is strong evidence of non-obviousness. *See Volvo Penta of the Americas, LLC v. Brunswick Corp.*, 81 F.4th 1202, 1212-13 (Fed. Cir. 2023).

e. Failure of Others

Other companies attempted to solve the waterproofing problem through different approaches (external covers, coatings, sealed housings) but these solutions proved inadequate. The '165 patent's specific structural arrangement—concealing components in internal waterproof compartments—succeeded where others failed.

f. Legal Significance

While secondary considerations are not dispositive, they are "objective evidence" that must be considered in the obviousness analysis. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). The complete absence of any discussion of secondary considerations in the Petition is a serious deficiency.

The Board has noted that failure to address secondary considerations "may weigh against finding a reasonable likelihood of success." *See Volvo Penta*, 81 F.4th at 1213.

7. Conclusion on Obviousness

For the foregoing reasons, the Petition has not demonstrated a reasonable likelihood of prevailing on its obviousness ground:

1. Conclusory assertions without evidentiary support
2. Impermissible hindsight reasoning
3. Inadequate expert analysis

4. No articulated motivation to modify Wang
5. Complete failure to address secondary considerations

Ground 2 should be denied.

V. Conclusion

For all the reasons set forth above, the Board should deny institution of inter partes review:

1. **Discretion under § 325(d)** should be exercised to deny institution because Wang presents substantially the same disclosure as the '165 patent itself, which was thoroughly reviewed by the Examiner during prosecution. Petitioner's repeated assertions that Wang is "identical" and "indistinguishable" from the '165 patent confirm this.
2. **Wang is not prior art** because:
 - Insufficient evidence of public availability as a printed publication
3. **Wang does not anticipate** because it lacks express disclosure of:
 - "Automatic" driving arrangement (claim 1)
 - "Pivotally move" operation (claim 1)
 - "Servo motor" (claim 2 and dependents)
 - "Gear worm sector" (claim 3 and dependents)
 - "Hydraulic manner" (claim 4)

- "Detachably coupled" battery cover (claims 7, 16, 23)
- "Slanted front wall" of front concealed compartment (claims 10, 13, 24)
- "Shaft sleeve" (claims 17, 19, 21)
- "Corresponding" non-circular cross-sections (claims 18, 20, 22)

4. **Wang does not render the claims obvious** because the Petition:

- Relies on conclusory assertions without evidentiary support
- Employs impermissible hindsight reasoning
- Provides inadequate expert analysis
- Fails to articulate any motivation to modify Wang
- Completely ignores secondary considerations

Any one of these grounds is sufficient to deny institution. Collectively, they present a compelling case for denial.

Patent Owner respectfully requests that the Board exercise its discretion to deny institution of inter partes review of claims 1-24 of U.S. Patent No. 10,822,165.

Date: October 29, 2025

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITS

This Patent Owner Preliminary Response (the “POPR”) consists of 8,021 words, excluding table of contents, table of authorities, certificate of service, this certificate, or table of exhibits. The POPR complies with the type-volume limitation of 14,000 words as mandated in 37 C.F.R. § 42.24. In preparing this certificate, counsel has relied on the word count of the word-processing system used to prepare the paper (Microsoft Word).

Date: October 29, 2025

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that the following documents were served by electronic service, by consent between the parties, on the date below:

**PATENT OWNER’S PRELIMINARY RESPONSE TO
PETITION FOR *INTER PARTES* REVIEW
OF UNITED STATES PATENT NO. 10,822,165
PURSUANT TO 35 U.S.C. § 313, 37 C.F.R. § 42.107**

and

EXHIBIT 2001

The names and addresses of the parties being served are as follows:

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