

IPR2026-00141  
Patent No. 11,627,242

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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BIRD BUDDY, INC.

Petitioner,

v.

FREDERICK PERKINS

Patent Owner.

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Case No. IPR2026-00141  
U.S. Patent No. 11,627,242

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**PATENT OWNER'S PRELIMINARY RESPONSE**

## TABLE OF CONTENTS

|                                                                                             | Page |
|---------------------------------------------------------------------------------------------|------|
| PATENT OWNER’S EXHIBIT LIST.....                                                            | vii  |
| I. INTRODUCTION.....                                                                        | 1    |
| II. OVERVIEW OF THE ’242 PATENT AND THE PRIOR ART .....                                     | 3    |
| A. The ’242 Patent.....                                                                     | 3    |
| B. Prosecution History .....                                                                | 6    |
| 1. ’242 Patent Issued After Two Rounds of Board Review .....                                | 6    |
| 2. Petitioner Relies on the Same or Substantially the Same Art<br>Previously Presented..... | 9    |
| C. The Cited Prior Art .....                                                                | 9    |
| 1. Bennett (EX1005) .....                                                                   | 10   |
| 2. Bonham (EX1006).....                                                                     | 13   |
| 3. Kin (EX 1007).....                                                                       | 15   |
| 4. Bevan and Raspberry Pi 2 Model B (EX1010) .....                                          | 17   |
| 5. Rofougaran (EX 1009).....                                                                | 17   |
| 6. Humphries (EX1008).....                                                                  | 18   |
| III. LEVEL OF ORDINARY SKILL IN THE ART.....                                                | 19   |
| IV. CLAIM CONSTRUCTION .....                                                                | 20   |

|    |                                                                                                                                                      |    |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| A. | Legal Standard .....                                                                                                                                 | 21 |
| B. | “Built In” .....                                                                                                                                     | 21 |
| C. | “Internally Mounted” .....                                                                                                                           | 23 |
| V. | THE PETITION FAILS TO DEMONSTRATE A REASONABLE<br>LIKELIHOOD OF PREVAILING UNDER ANY ASSERTED<br>GROUND .....                                        | 24 |
| A. | Ground 1 – Petitioner fails to show that the challenged claim 1 and<br>3 is obvious over Bennett.....                                                | 25 |
| 1. | USPTO Properly Considered Bennett .....                                                                                                              | 25 |
| 2. | Bennett does not teach “the bird feeder comprising ... the<br>camera internally mounted to the bird feeder”<br>(claim 1(e)).....                     | 28 |
| 3. | Bennett does not teach “the bird feeder comprising ... an<br>internal power source” (claim 1(g)).....                                                | 34 |
| B. | Grounds 1A (Bennett in view of Rofougaran) and 1B (Bennett in<br>view of Bevan, Raspberry Pi 2 Model B) Do Not Render Obvious<br>Claims 2, 4-6 ..... | 38 |
| C. | Ground 2 – Petitioner fails to show that the challenged claim 1 is<br>obvious over Bonham .....                                                      | 39 |
| 1. | Bonham is non-analogous art .....                                                                                                                    | 39 |
| 2. | Prior USPTO Review of Substantially Similar Art Confirms<br>That Bonham Does Not Satisfy the “Bird Feeder” Limitation<br>of Claim 1 .....            | 47 |

|    |                                                                                                                                                                                                   |    |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 3. | Bonham does not teach the “a bird feeder” claimed in claim 1 or its claimed structural elements (claim 1(pre) and 1(a)-(d)).                                                                      | 50 |
| 4. | Bonham does not teach “the bird feeder comprising ... the camera internally mounted to the bird feeder such that the camera is aligned with the feed port to observe feeding birds” (claim 1(e)). | 52 |
| 5. | Bonham does not teach “a bird feeder with a built in ... internet connection, the bird feeder comprising ... a WiFi adapter located within the feeder housing” (claim 1(a), 1(h)).                | 53 |
| D. | Grounds 2A (Bonham in view of Rofougaran), 2B (Bonham in view of Bennett Humphries), and 2C (Bonham in view of Bevan and Raspberry Pi 2 Model B) Do Not Render Obvious Claims 2-6                 | 55 |
| E. | Ground 3 – Petitioner fails to show that the challenged claim 1 is obvious over Kin                                                                                                               | 57 |
| 1. | Kin is non-analogous art                                                                                                                                                                          | 57 |
| 2. | Prior USPTO Review of Substantially Similar Art Confirms That Kin Does Not Satisfy the “Bird Feeder” Limitation of Claim 1                                                                        | 59 |
| 3. | Kin does not teach does not teach the “a bird feeder” claimed in claim 1 or its claimed structural elements (claim 1(pre) and 1(a)-(d)).                                                          | 63 |
| 4. | Kin does not teach “the bird feeder comprising ... an internal power source” (claim 1(g)).                                                                                                        | 65 |

|     |                                                                                                                                                                   |    |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| F.  | Grounds 3A (Kin in view of Rofougaran), 3B (Kin in view of Bennett), and 3C (Kin in view of Bevan, Raspberry Pi 2 Model B) Do Not Render Obvious Claims 2-6 ..... | 67 |
| VI. | CONCLUSION .....                                                                                                                                                  | 69 |

## TABLE OF AUTHORITIES

|                                                                                                 | Page(s) |
|-------------------------------------------------------------------------------------------------|---------|
| <b>Cases</b>                                                                                    |         |
| <i>Arendi S.A.R.L. v. Apple Inc.</i> ,<br>832 F.3d 1355 (Fed. Cir. 2016) .....                  | 25, 51  |
| <i>Biosonix, LLC v. Hydrowave, LLC</i> ,<br>230 F. Supp. 3d 598 (E.D. Tex. 2017).....           | 20      |
| <i>Chemours Co. FC, LLC v. Daikin Indus.</i> ,<br>4 F.4th 1370 (Fed. Cir. 2021) .....           | 45      |
| <i>Garmin Int'l, Inc. v. Logantree, LP</i> ,<br>825 Fed. App'x 894 (Fed. Cir. 2020) .....       | 25      |
| <i>In re Clay</i> ,<br>966 F.2d 656 (Fed. Cir. 1992) .....                                      | 47, 60  |
| <i>In re Nat. Alternatives, LLC</i> ,<br>659 F. App'x 608 (Fed. Cir. 2016) .....                | 41, 58  |
| <i>In re Oetiker</i> ,<br>977 F.2d 1443 (Fed. Cir. 1992) .....                                  | 39      |
| <i>Okajima v. Bourdeau</i> ,<br>261 F.3d 1350 (Fed. Cir. 2001) .....                            | 20      |
| <i>Phillips v AWH Corporation</i> ,<br>415 F.3d 1303 (Fed. Cir. 2005) .....                     | 21      |
| <i>PlaSmart, Inc. v. Kappos</i> ,<br>482 F. App'x 568 (Fed. Cir. 2012) .....                    | 30      |
| <i>Polygroup Ltd. MCO v. Willis Elec. Co., Ltd</i> ,<br>759 F. App'x 934 (Fed. Cir. 2019) ..... | 41      |

|                                                                                                         |    |
|---------------------------------------------------------------------------------------------------------|----|
| <i>SRI Int’l v. Matsushita Elec. Corp. of Am.</i> ,<br>775 F.2d 1107 (Fed. Cir. 1985) .....             | 21 |
| <i>Virtek Vision Int’l ULC v. Assembly Guidance Sys., Inc.</i> ,<br>97 F.4th 882 (Fed. Cir. 2024) ..... | 34 |
| <i>Vitronics Corp., v. Conceptronic Inc.</i> ,<br>90 F.3d 1576 (Fed. Cir. 1996) .....                   | 21 |

## **Statutes**

|                       |        |
|-----------------------|--------|
| 35 U.S.C. § 103 ..... | 1      |
| 35 USC § 314(a) ..... | passim |
| 35 U.S.C. § 323 ..... | 1      |

## **Regulations**

|                            |    |
|----------------------------|----|
| 31 C.F.R. § 41.50(b) ..... | 27 |
| 37 C.F.R. § 42.24(b) ..... | 71 |
| 37 C.F.R. § 42.24(d) ..... | 71 |
| 37 C.F.R § 42.100(b) ..... | 21 |
| 37 C.F.R. § 42.107 .....   | 1  |
| 37 C.F.R. § 42.108 .....   | 24 |

## **Other Authorities**

|                        |        |
|------------------------|--------|
| MPEP § 2141.01(a)..... | 47, 60 |
|------------------------|--------|

**PATENT OWNER’S EXHIBIT LIST**

| <b><u>Exhibit<br/>No.</u></b> | <b><u>Description</u></b>                                                                                                                                                                                                                                                                                                                         |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2001                          | License Agreement (Redacted) between Perkins and Woodstream dated July 31, 2023                                                                                                                                                                                                                                                                   |
| 2002                          | Correspondence between Inventor Perkins and Mr. Buzzard, May 2023                                                                                                                                                                                                                                                                                 |
| 2003                          | <i>Woodstream et al v. Bird Buddy Inc.</i> , C.A. No. 1:24-cv-01236-JCB (D. Del.), D.I. 1, Complaint (November 8, 2024)                                                                                                                                                                                                                           |
| 2004                          | Intentionally Left Blank                                                                                                                                                                                                                                                                                                                          |
| 2005                          | U.S. Patent No. 9,247,719 – Bennett                                                                                                                                                                                                                                                                                                               |
| 2006                          | U.S. Patent No. 9,137,974 – Boehm                                                                                                                                                                                                                                                                                                                 |
| 2007                          | Morris, A., “IPBC Global 2025: Acting USPTO Director Says IPR Use Needs to Change,” IAM (June 10, 2025)                                                                                                                                                                                                                                           |
| 2008                          | Answer to Amended Complaint and Counter Claims, filed September 5, 2025 (Case 1:24-cv-01236-JCB, Doc. 32)                                                                                                                                                                                                                                         |
| 2009                          | Scheduling Order (Case 1:24-cv-01236-JCB, Doc. 38)                                                                                                                                                                                                                                                                                                |
| 2010                          | Guidance on USPTO’s rescission of “Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation,” (“Guidance Memo”) (March 24, 2025, available at: <a href="https://www.uspto.gov/sites/default/files/documents/guidance_">https://www.uspto.gov/sites/default/files/documents/guidance_</a> |
| 2011                          | Cambridge University Press, Cambridge Advanced Learner’s Dictionary & Thesaurus, “bird feeder,” <a href="https://dictionary.cambridge.org/dictionary/english/bird-feeder">https://dictionary.cambridge.org/dictionary/english/bird-feeder</a> (last visited Mar. 2, 2026).                                                                        |

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|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2012 | Breen et al., What Can Nest-Building Birds Teach Us?, 11 Comp. Cognition & Behav. Rev. 83 (2016), <a href="https://comparative-cognition-and-behavior-reviews.org/wp/wp-content/uploads/2016/04/CCBR_05-Breen_v11-2016.pdf">https://comparative-cognition-and-behavior-reviews.org/wp/wp-content/uploads/2016/04/CCBR_05-Breen_v11-2016.pdf</a> |
| 2013 | M.F. Guigueno & S.G. Sealy, Nest Sanitation in Passerine Birds: Implications for Egg Rejection in Hosts of Brood Parasites, 153 J. Ornithol. 35 (2012), <a href="https://doi.org/10.1007/s10336-011-0731-0">https://doi.org/10.1007/s10336-011-0731-0</a> (Abstract)).                                                                          |

## **I. INTRODUCTION**

Pursuant to 35 U.S.C. § 323 and 37 C.F.R. § 42.107, Woodstream and Patent Owner Frederick Perkins (“Patent Owner”) respectfully submit this Preliminary Response to Bird Buddy, Inc.’s (“Petitioner”) Petition for *Inter Partes* Review of U.S. Patent No. 11,627,242 (“the ’242 Patent”) (EX1003) (“IPR”).

The ’242 Patent discloses a system and method for providing improved bird feeders, especially self-contained bird feeders capable of providing streaming video. The system and method employ a novel design offering a streaming video from a self-contained feeding platform, described in the drawings and detailed description. (EX1003 Abstract).

Petitioner relies on three primary references in seeking review of the ’242 Patent: U.S. Pat. Pub. 2016/0106072 (EX1005 (“Bennett”)), U.S. Pat. Pub. 2012/0048203 (EX1006 (“Bonham”)), and U.S. Pat. Pub. 2007/0295277 (EX1007 (“Kin”)) (Pet. 35–36). In Grounds 1, 2, and 3 of the IPR, Petitioner challenges independent claim 1 as obvious under 35 U.S.C. § 103 based on each primary reference as a standalone § 103 reference. The remaining Grounds 1A-1B, 2A-2C, and 3A-3C rely on one of these primary references—Bennett, Bonham, and Kin, respectively—together with additional secondary references, to challenge the dependent claims depending from claim 1.

The Petition fails to show that any claim of the '242 Patent is rendered obvious. Each primary reference fails to teach or suggest every limitation of independent claim in at least the following respects:

- Bennett does not teach or suggest the limitations of a bird feeder with a built in camera, the camera internally mounted to the bird feeder such that the camera is aligned with the feed port to observe feeding birds, or the bird feeder comprising an internal power source;
- Bonham does not disclose a bird feeder. Bonham does not teach or suggest a bird feeder comprising a feed port disposed on a feeder bottom, a built in camera internally mounted to the bird feeder such that the camera is aligned with the feed port to observe feeding birds, or a bird feeder with a WiFi adapter located within the feeder housing;
- Kin does not disclose a bird feeder. Kin further does not teach or suggest a bird feeder with a built in camera internally mounted to the bird feeder such that the camera is aligned with the feed port to observe feeding birds, or a bird feeder with an internal power source.

Because the primary references do not disclose each and every limitation of claim 1, Grounds 1A–1B, 2A–2C, and 3A–3C necessarily fail as well, as they rely on

secondary references to supply limitations recited in the dependent claims—not to remedy limitations missing from the primary references themselves.

Further, Petitioner merely recasts the prior art considered during examination of the '242 Patent, relying upon similar arguments that were already extensively considered during prosecution and deemed not to render the claims of the '242 Patent unpatentable. Further, Petitioner relies on conclusory expert testimony to supply motivations to modify the primary references to arrive at the claimed invention; however, this testimony suffers from hindsight bias, lacks specificity, and does not cure the deficiencies of these references.

Accordingly, there is no “reasonable likelihood that Petitioner would prevail with respect to at least one claim” (35 USC § 314(a)) of the '242 Patent. The Petition should be denied.

## **II. OVERVIEW OF THE '242 PATENT AND THE PRIOR ART**

### **A. The '242 Patent**

The '242 Patent, entitled “Self-Contained Bird Feeder with Camera and Streaming Video”, generally teaches an improved self-contained bird feeder having components for capturing still pictures or videos of feeding birds, and transmitting the images and live streaming video over the internet to remote computers. EX1003 1:39-49. This is illustrated in Fig. 1, reproduced below, depicting an embodiment of the self-contained bird feeder including a feeder housing 5, computer 20, feed

compartment 6, battery 22, feeder bottom 14, built in camera 10, feed port 11, and perch 12. *Id.* 2:8-14 and 38-48. The internet connection hardware is described as being attached to the computer controller. *Id.* 3:34-36.

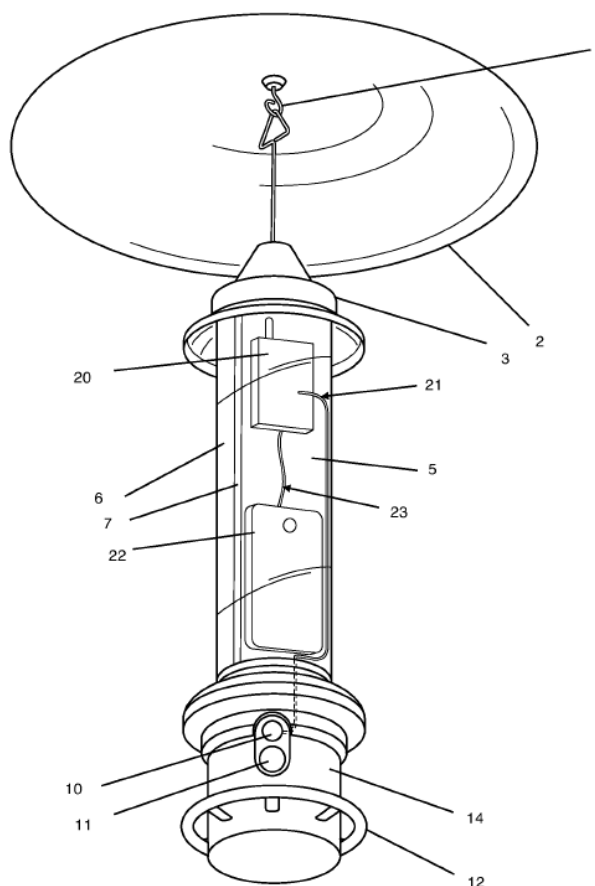


FIG. 1

EX1003, FIG. 1. The '242 Patent has one independent claim. EX1003 7:1-11. Claim 1 is directed to a self-contained bird feeder configured to provide detailed images over a wireless network, and comprising a bird feeder with a built in camera, computer and internet connection. *Id.* The claimed bird feeder comprises: a feeder housing; a feeder bottom; a feed port disposed on the feeder bottom; the camera

internally mounted to the bird feeder, such that the camera is aligned with the feed port to observe feeding birds; the computer located within the feeder housing; an internal power source; and a WiFi adapter located within the feeder housing. *Id.* 7:5-11.

The self-contained bird feeder described in the '242 Patent requires that the camera is built into the feeder, as depicted in the specification and figures. *Id.* 4:27-28; Fig. 1-3, and 7:4. Furthermore, the claimed bird feeder must have the camera internally mounted, such as having at least a portion of the camera internal to the bird feeder structure. *See* EX1003 4:27-28; 7:7. The specification teaches: “[a]n opening may be machined in the feeder bottom 14 to allow the camera 10 to be mounted in close proximity to the feed port 11,” *id.* 2:58-60; “[a] viewing port is machined into the bird feeder. The viewing port is aligned with the feed port to provide an optical path from an internally mounted camera to the area in front of the feed port. A digital camera is mounted in the bird feeder. The camera is aligned with the viewing port so that it can observe feeding birds,” *id.* 4:24-34; and, that the self-contained feeder may be hung outside, within range of connection to a WiFi router. *Id.* 5:9-10.

Thus, '242 Patent discloses a bird feeder that is a self-contained platform containing necessary elements to stream images and video of feeding birds over the Internet. *Id.* 1:66-2:6.

## **B. Prosecution History**

### **1. '242 Patent Issued After Two Rounds of Board Review**

The patent application leading to the '242 Patent, No. 14/735,282 (“the '282 application”), was filed on June 10, 2015. EX1004 5. Claim 1 originally claimed (EX1004 30):

1. A self-contained bird feeder configured to provide detailed images over a wireless network, comprising:
  - a. a feeder housing;
  - b. a feeder bottom;
  - c. a feed port disposed on the feeder bottom;
  - d. a camera disposed in close proximity to the feed port;
  - e. a computer in communication with the camera;
  - f. an internal power source; and a
  - g. a WiFi adapter.

In a first Office Action on May 8, 2017, the Examiner rejected original claim 1 over U.S. Patent Application Publication No. 2016/0156989 (“Lovett” EX1013). EX1004 50-51. The Examiner cited patent 9,247,719 (“Bennett '719”)—corresponding to the disclosure of the Bennett reference publication relied on by Petitioner—as pertinent prior art. *Id.* at 52.

Patent Owner responded by amending the claims to “a bird feeder with a built in camera, computer, and internet connection, the bird feeder comprising” the elements (a)-(g) listed above, specifying in (d) that the camera is “mounted to the bird feeder”, in (e) that the computer is “located within the feeder housing” and in (g) that the WiFi adapter is “located within the feeder housing”. *Id.* at 61. Patent Owner argued that Lovett discloses an external dish containing bird feed, and a separate housing containing a third party camera facing the feeding dish. *Id.* at 66-67. Patent Owner argued that the feeder of Lovett is therefore not self-contained because no part of the camera, computer, power source, and WiFi adapter are inside the feed dish that serves as the bird feeder. *Id.*

The Examiner withdrew the rejection of claim 1 over Lovett and instead issued a new rejection over U.S. Patent Application Publication No. 2015/0373945 (“Sung” EX1019). EX1004 75-76. In response, Patent Owner argued that Sung discloses a *pet* feeder, not a *bird* feeder. *Id.* at 93. The Examiner disagreed and Patent Owner appealed, contending that Sung discloses a pet or livestock feeder, not a bird feeder as the term would be understood by a person with ordinary skill in the art (“POSITA”). *Id.* at 152. The Board reversed the Examiner’s rejection, finding that, contrary to the Examiner’s assertion that birds are a well-known type of pet, Sung’s disclosure of a pet feeder “provides no support for such a contention.” *Id.* at 208.

In a subsequent November 18, 2019 Office Action, the Examiner pivoted back to Lovett in rejecting claim 1. *Id.* at 213-214. Bennett '719 was cited as part of an obviousness combination with Lovett and U.S. Patent Application Publication No. 2014/0355446 (“Altman” EX 1012). *Id.* at 217.

Patent Owner responded without amendment and by arguing again that Lovett is not self-contained and does not disclose a built in camera, only disclosing a feed dish separated from a housing that contains a third party, off-the-shelf camera. *Id.* at 230. Patent Owner again argued that none of the claimed elements of the camera, computer, power source, and WiFi adapter are inside the feed dish in Lovett that serves as the bird feeder; Lovett discloses a third party camera and controller outside the bird feeder dish, not a camera and computer that are built in or “integrated with the feeder structure and design”. *Id.* at 231.

The Examiner disagreed in an April 8, 2020 Office Action, prompting a second appeal in which Patent Owner argued the same distinction over Lovett. *Id.* at 293-296. The Board ultimately reversed the Examiner’s rejection over Lovett, agreeing that the feed dish disclosed in Lovett “does not contain a built-in camera or power source or WiFi adaptor, as claimed”. *Id.* at 347. The Board also concluded that Lovett does not disclose a “feed port” as claimed because Lovett simply

discloses an open dish. *Id.* Bennett '719 was explicitly considered by the Board in deciding to reverse the Examiner's rejection. *Id.* at 343.

The Notice of Allowance contained an Examiner's amendment to specify that the camera is "internally" mounted "such that the camera is aligned with the feed port to observe feeding birds". *Id.* at 372-373.

## **2. Petitioner Relies on the Same or Substantially the Same Art Previously Presented**

As detailed in Patent Owner's Discretionary Denial Brief (Paper 8), the Petition relies on the same or substantially similar prior art and arguments previously considered by the Office. With regard to each ground, Patent Owner cites the Board's prior analysis of these same references as persuasive evidence that Petitioner has failed to demonstrate a reasonable likelihood that at least one challenged claim is unpatentable. The prior Board reasoning underscores the Examiner's full consideration of substantially similar art relied upon in this Petition, and the Petition identifies no material error that would warrant a different outcome on institution.

### **C. The Cited Prior Art**

Petitioner challenges claims of the '242 Patent, relying on the primary references of Bennett (Ground 1), Bonham (Ground 2), and Kin (Ground 3) (each cited individually), and argues each alone renders claim 1 obvious under § 103. Pet.

36-37. The primary references are further discussed below. The remaining Grounds 1A-1B, 2A-2C, and 3A-3C rely on the respective primary reference—Bennett, Bonham, or Kin—together with additional secondary references, to challenge the claims 2-6 depending from claim 1, including Rofougaran (Ex1009) cited for providing a WiFi dongle (Pet. 84), Bevan (EX1010) cited for providing an automated camera shutter release controlled by a Raspberry Pi microcomputer (Pet. 89), and Humphries (EX1008) cited for providing a hopper allowing gravity to feed seed from the hopper into the feeding bays. Pet. 88.

**1. Bennett (EX1005)**

Bennett, raised in Ground 1, discloses that feeders are used in backyards “to attract hummingbirds, songbirds, and other flying animals”, but a problem arises for some birds that overwinter in climates with freezing conditions, limiting food and water sources for the birds. EX1005 ¶¶4-6. The disclosure of Bennett solves this problem by providing “...flying animal sustenance stations (commonly referred to as birdfeeders) that hold liquid sustenance for consumption by birds (commonly used for feeding hummingbirds and providing water to songbirds) and other flying animals (e.g., bats, moths), having control and monitoring systems that may heat the liquid food as necessary to prevent the food from freezing in cold weather; that may cool the liquid food as necessary to retard bacterial, fungal, and other growth within the food in warm weather ....” *Id.* ¶8. To this end, Bennett discloses a temperature

sensor 107 and a thermoelectric heating and cooling device 108 connected to a controller 105 to maintain a specified temperature range of liquid 104. *Id.* ¶42.

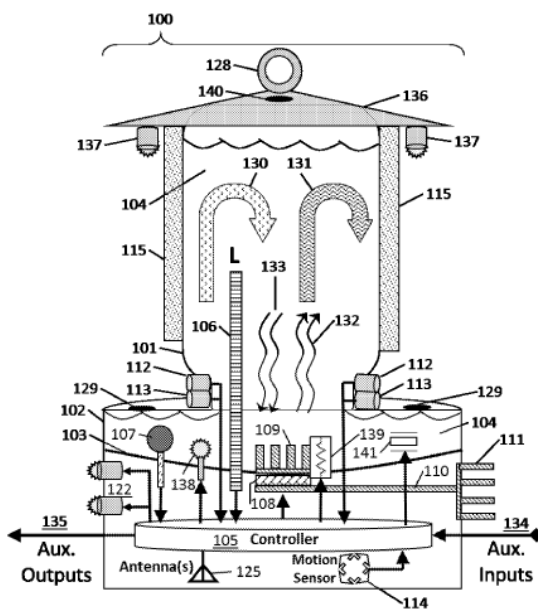


FIG. 1A

Bennett also discloses communicating “live video and audio of activity surrounding the feeder” and that the feeder “may receive and ... bi-directionally communicate information wirelessly with other stations and devices as necessary for configuration by a user, and control, monitoring, and reporting information to a user.” *Id.* ¶8. Bennett provides “[a]ny number (including 0) of imaging 112 or audio 113 sensors may be used in an embodiment, and may be located near feeding ports 129 as shown in FIG. 1A, or on the underside of the cap 136 as depicted in FIG. 3A” (*Id.* ¶49) and explains “[t]he cap 136 may also be fitted with electrical loads [...] or

fitted with sensors such as, but not limited to, audio 112 and imaging 113 sensors depicted mounted *to* the cap 136 in FIG. 3A.” *Id.* ¶40 (emphasis added). Bennett discloses that the audio 112 and imaging sensors 113 mounted to the cap 136 can be used to determine the presence of an animal for deciding when to activate UV emitters 138 that prevent or reduce the spread of infectious agents in the liquid 104 (*Id.* ¶47), or for determining unexpected motion from undesired animals (*Id.* ¶78), but does not provide further detail on the components of the audio 112 and imaging sensors 113 or the method of mounting to the cap 136.

In Fig. 2A, reproduced below, Bennett provides a controller having a processor 200 and memory 201, a radio 202, and an antenna 123 for wireless communications 212 with external devices 213. *Id.* ¶15. Bennett does not provide an internal power supply, instead teaching “[t]he power management module 203 receives power through a connection to a generated 216 power source (e.g., transformed household line power, fuel cell, solar power, wind power) or through a connection to a stored 217 power source (e.g., battery, super capacitor), and conditions and transforms it to supply the voltages and currents required by the modules comprising the controller 105.” *Id.* ¶58. The power management module 203 is an integrated circuit that simply converts power supplied from other sources 216, 217. *Id.* ¶¶58-59.

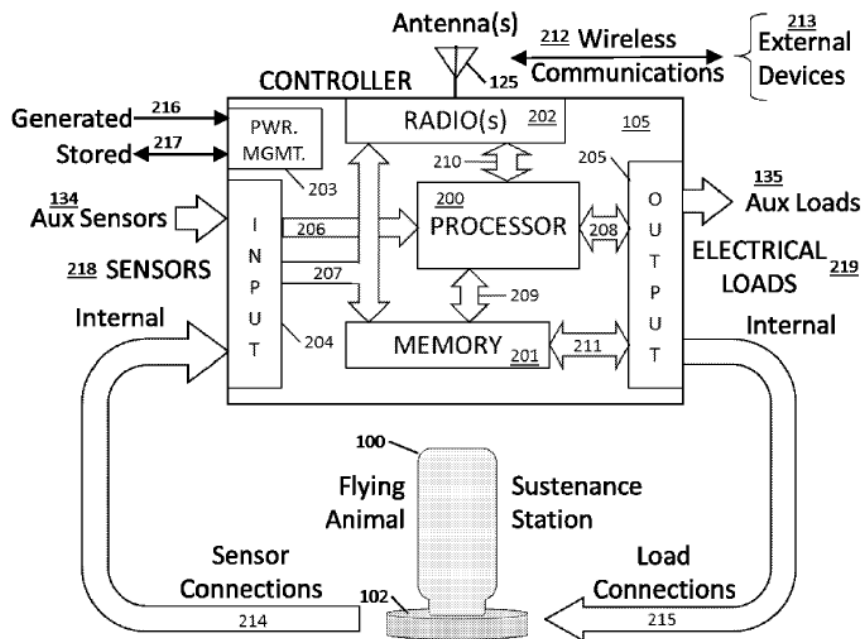


FIG. 2A

## 2. Bonham (EX1006)

Bonham describes a need for gathering environmental data particularly concerning bird migration and other bird nesting behaviors, such as rates at which adult birds feed their young, “nest selection, nest building, fledging, roosting, predation and nest parasitism.” EX1006 ¶¶2-6. To monitor these bird nesting behaviors, Bonham discloses a birdhouse with a camera positioned above the interior and oriented to monitor the inside of the housing. *Id.* Abstract, Fig. 1. Bonham provides a method for collecting “scientifically valid biological data ... comprised of a camera-equipped birdhouse with sensors, a data-logger and the ability to download images and data to a computer.” *Id.* ¶13.

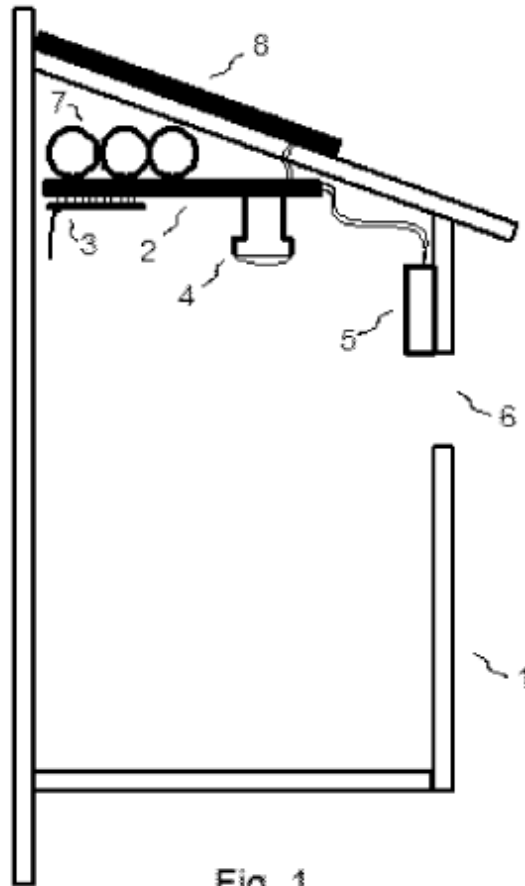


Fig. 1

Regarding Fig. 1, Bonham explains that the birdhouse contains an electronic circuit board with a CPU, memory, and embedded software, along with a two-way wireless transceiver for communication with a computer, an image sensor and lens, such as a motion detector installed across the entrance hole, and a battery-powered system rechargeable by an external solar panel. *Id.* ¶14. Data collected from these

components is used to derive biological information—such as feeding and nesting rates—allowing users to “detect biological activity” and contribute data to a broader scientific effort. *Id.* ¶¶4–7.

### **3. Kin (EX 1007)**

Kin addresses a problem related to delivering food to pets when owners leave their pets at home and don’t want to either send their pets to a “pet hotel” or ask friends to take care of their pets. EX1007 ¶¶2-3. Kin also recognizes that pet owners would like the option to be “aware of the status of the pet and feed[] the pet at a desired time even at a remote place”. *Id.* ¶17. Kin, as reproduced in Fig. 2 below, thus discloses “a remote interactive feeder, comprising an operating device as an operation platform comprising a key set, an image shooter, a display, a microphone unit and a speaker; a web server connected with the operating device; and a feeding device connected with the web server to offer a feeding in an interactive way by receiving a control signal from the operating device. Accordingly, a novel remote interactive feeder is obtained.” *Id.* ¶5.

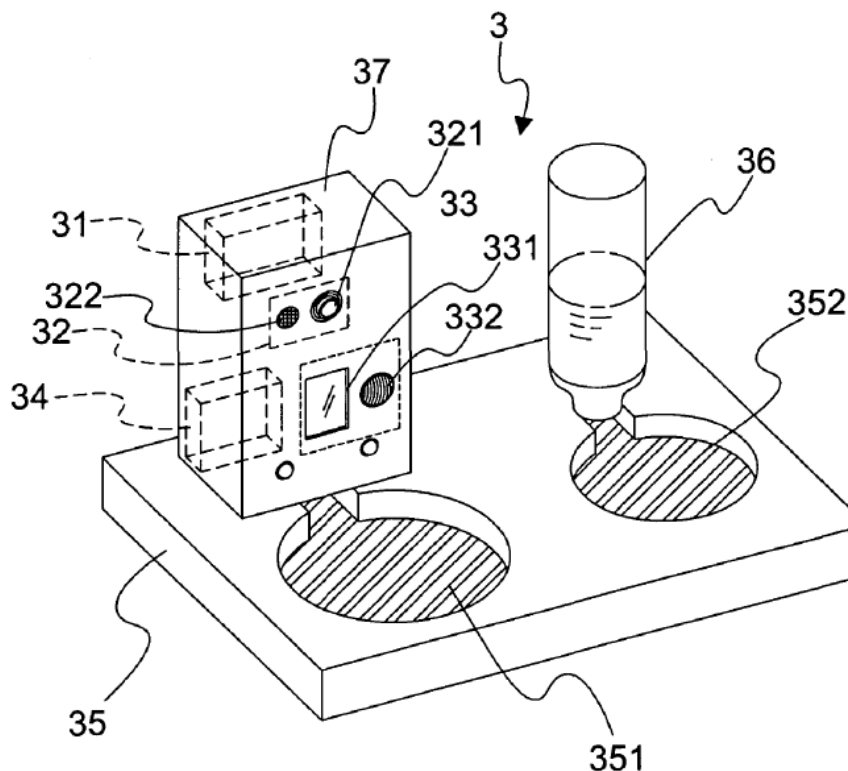


FIG. 2

Kin teaches that the remote interactive feeder comprises “an operating device 1, a web server 2, and a feeding device 3, where a pet is fed with a time and rationed feeding in a remote interactive way.” *Id.* ¶12. Kin thus can be considered to provide a pet feeder, with wireless control capabilities. As shown in Fig. 2 above, Kin discloses providing food and water to pets by filling a feed containing area 351 and a water containing area 352 provided in a base 35. *Id.* ¶15. Kin also teaches “...the photo of the environment and the sound of the pet is sent to the operating device 1 through the image acquisition device 321 and the microphone 322 of the input unit

32 so that the pet raiser sees the environment and the status of the pet through the operating device 1; at the same time, the photo and the voice of the pet raiser are displayed and sound on the display 331 and by the loudspeaker 332 of the output unit 33.” *Id.* ¶17. Kin adds, “[i]n this way, the pet is aware of the pet raiser’s caring and is noticed of a feeding; and the pet raiser is aware of the status of the pet and feeds the pet at a desired time even at a remote plate.” *Id.* ¶17.

#### **4. Bevan and Raspberry Pi 2 Model B (EX1010)**

The Raspberry Pi 2 Model B portion of EX1010 is a list of the specifications of a Raspberry Pi 2 Model B unit as of February 28, 2015. EX1010 12. The Bevan portion of EX1010 describes a rudimentary attempt to control a Canon DSLR camera shutter using Raspberry Pi. *Id.* 5-7.

#### **5. Rofougaran (EX 1009)**

This reference, U.S. Patent Application Publication No. 2009/0006677 (“Rofougaran”), discloses a USB dongle device shown in Fig. 3 below that provides wireless transmission capabilities to devices that have a USB port. EX1009 ¶81.

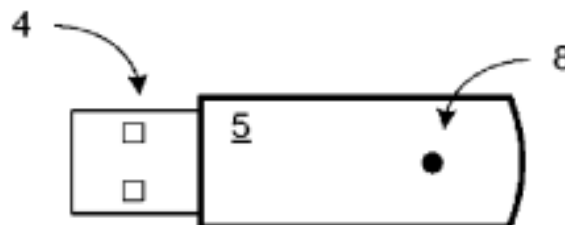
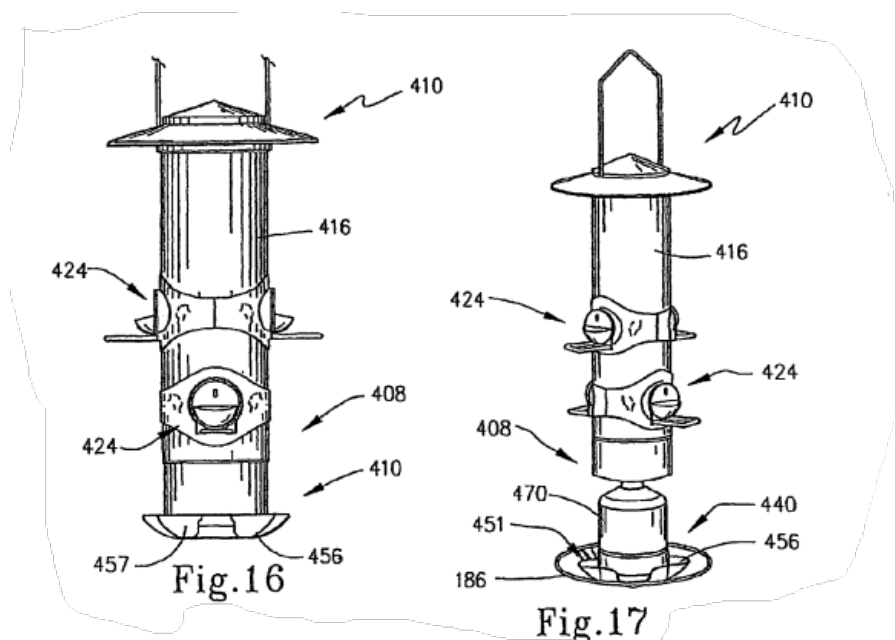


**FIG. 3**

### **6. Humphries (EX1008)**

This reference, U.S. Patent No. 8,683,947 (“Humphries”), discloses a bird feeder in the form of a hopper feeder 10 that is coupled with a liquid nutrient reservoir 40. EX1008 5:47-51. Humphries describes a bird feeder as an apparatus “for attracting wild birds” to a location “adjacent a home’s porch or window, where birds may be viewed at one’s leisure”. *Id.* 1:21-34. Humphries discloses, as shown in Figs. 16-17 reproduced below, a bird feeder 410 having a birdseed reservoir 416 that distributes seed to food stations 242. *Id.* 9:33-43.



The bird feeder 410 also includes a liquid reservoir 440 that feeds liquid to water compartments 456, 457. *Id.* 9:17-32. The bird feeder according to the various embodiments of Humphries can be mounted for wild bird access via a pole mount 12 or hung from a hanger 14. *Id.* 5:47-56.

### III. LEVEL OF ORDINARY SKILL IN THE ART

Petitioner states that a POSITA would have had a B.S. degree in mechanical engineering or at least two years' experience with the design of electromechanical devices prior to the critical date of the '242 Patent, relying upon Expert's declaration. Pet. 35.

Patent Owner agrees that a POSITA would have at least this technical experience, but would also have studied or gained some practical experience

concerning feeding habits of wild birds at bird feeders. *See, e.g., Biosonix, LLC v. Hydrowave, LLC*, 230 F. Supp. 3d 598, 604 (E.D. Tex. 2017) (“It seems implausible that an individual with a Bachelor’s degree in any engineering field who has neither studied nor gained some practical experience concerning marine life would qualify as a PHOSITA in the field of the art in question, which is the field of electronic fish-attracting devices. To preclude study of, or experience with, game fish from the definition would not serve the purpose of defining PHOSITA, which is to provide a ‘prism or lens through which a judge [or] jury ... views the prior art and the claimed invention.’”) (quoting *Okajima v. Bourdeau*, 261 F.3d 1350, 1354–55 (Fed. Cir. 2001)).

Dr. Clark’s declaration does not state that he has consulted an ornithologist or otherwise studied bird feeding in any capacity. EX1001. This lack of experience is evident in Dr. Clark’s opinions seeking to summarily modify the primary references to arrive at the claimed invention without any knowledge of how wild birds feed at bird feeders. Indeed, during prosecution, Patent Owner presented testimony of an ornithologist to explain certain aspects of the bird feeder. EX1004 279-281.

#### **IV. CLAIM CONSTRUCTION**

Petitioner alleges that it is construing the terms of the claims consistently with the way they were used during prosecution of the patent application, and proposes meanings for terms, including “built in” and “internally mounted”. Petitioner

improperly relies on result-oriented reasoning and is tailoring the constructions based on its non-infringement positions in District Court. The Patent Owner proposes the below constructions of the terms “built in” and “internally mounted”.

**A. Legal Standard**

Under 37 CFR § 42.100(b), claim construction terms should be given their ordinary and customary meaning to a POSITA in view of the intrinsic record. *Phillips v AWH Corporation*, 415 F.3d 1303, 1313 (Fed. Cir. 2005). A patent’s intrinsic evidence includes the claim language, the specification, and the prosecution history. *Vitronics Corp., v. Conceptronic Inc.*, 90 F.3d 1576, 1582-83 (Fed. Cir. 1996). The claim terms, however, should not be interpreted simply “to cover or not to cover the accused device.” *SRI Int’l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1118 (Fed. Cir. 1985) (quotations omitted).

**B. “Built In”**

Petitioner proposes to construe the term “built in” to mean “functionally inseparable from [the bird feeder]”. Pet. 39. Patent Owner proposes to construe “built in” as “the element is integrated with the feeder structure and designed for use with the feeder, not a standalone component with significant value and separate functionality”. The difference in scope between the two proposed constructions has no bearing on this IPR as the cited art fails to disclose the “built in” feature even under Petitioner’s construction. Petitioner advances its narrow construction for the

sake of advancing a non-infringement position in the District Litigation. Nevertheless, Patent Owner responds with its own construction.

The term “built in” was added by amendment in response to the first Non-final Office Action, amending claim 1 to recite “a bird feeder with a built in camera, computer, and internet connection....” EX1004 61. Patent Owner relied on this limitation to distinguish from Lovett, which disclosed a bird feeding dish spatially separated from a camera. *Id.* at 66-67. In deciding the appeal, the Board agreed that the feed dish disclosed in Lovett does not contain a built-in camera, power source, or WiFi adaptor. *Id.* at 347.

Patent Owner argued to overcome Lovett that the camera device disclosed in Lovett is not built in because it is a third party, stand-alone device that has separate functionality and significant value as a separate component outside of the bird feeder. EX1004 66-68. Lovett, for example, specifically discloses an IPHONE, other smartphone, or GOPRO to take the photos (EX1013 ¶28), which are clearly third-party devices that have separate functionality and significant stand-alone value outside of the housing of Lovett that faces a bird feeding dish. In contrast, the built in computer and camera of the '242 Patent are “integrated with the feeder structure and design” (EX1004 67, 231, 262).

Petitioner appears to advocate for a construction that the “built in” elements have no function outside of the feeder, which is impermissibly narrower than the arguments made in prosecution and as taught in the specification. Petitioner even cites Patent Owner’s argument that supports Patent Owner’s construction, citing the “dedicated computer (e.g., Raspberry Pi) is built into the bird feeder. It is integrated with the self contained bird feeder structure and design...” (Pet. 41, quoting Patent Owner argument at EX1004 262) (emphasis added). The term “built in” should thus follow Patent Owner’s construction; the component is not a separate device with significant standalone value, but an element integrated with the feeder structure and designed for use with the feeder.

### **C. “Internally Mounted”**

Petitioner proposes to construe the term “internally mounted” to mean that a component is “inside and mounted to the feeder [housing]”. Pet. 42. At first glance, Patent Owner does not dispute that language. However, it is apparent throughout the Petition that Petitioner does not apply its own construction and instead treats “internally mounted” as not requiring any portion of the component to be “inside ... the feeder housing.” Patent Owner addresses this inconsistency in each Ground as necessary. Accordingly, Patent Owner clarifies that “internally mounted” requires that at least a portion of the component be inside of, and mounted to, the feeder housing. This construction is consistent with the

specification and with how Patent Owner distinguished Lovett during prosecution. *See* EX1003 4:21–42 (“A viewing port is machined into the bird feeder. The viewing port is aligned with the feed port to provide an optical path from an internally mounted camera to the area in front of the feed port. A digital camera is mounted in the bird feeder.”); EX1004 66 (Applicant’s response to first office action stating “...the camera is mounted within the bird feeder...”), 95 (same); 68 (“...Applicant's camera, computer and other elements are self contained within a bird feeder...”), 97 (same); 230 (“It is in the same location as the camera—inside the claimed bird feeder.”).

**V. THE PETITION FAILS TO DEMONSTRATE A REASONABLE LIKELIHOOD OF PREVAILING UNDER ANY ASSERTED GROUND**

For at least the reasons below, IPR should not be instituted because the Petition does not demonstrate a reasonable likelihood of success on any of the proposed grounds of invalidity. 35 U.S.C. § 314(a) and 37 C.F.R. § 42.108. Institution is only permissible when the Petition establishes a “reasonable likelihood that the petitioner would prevail with respect to at least one of the claims challenged in the petition.” 35 U.S.C. § 314(a). Petitioner fails to meet this threshold requirement as every primary reference relied upon to challenge independent claim 1 fails to disclose, teach, or suggest at least one of the limitations, and the Board should

deny institution. *Garmin Int'l, Inc. v. Logantree, LP*, 825 Fed. App'x 894, 898-99 (Fed. Cir. 2020).

**A. Ground 1 – Petitioner fails to show that the challenged claim 1 and 3 is obvious over Bennett**

Regarding Ground 1, Petitioner's challenge must be denied. Petitioner has failed to show Bennett teaches all limitations of claim 1. To find a claim as obvious in light of a single prior art reference, it must "have been obvious to modify that reference to arrive at the patented invention." *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1361 (Fed. Cir. 2016). Here, Petitioner raises Bennett as a standalone § 103 reference, essentially admitting that Bennett does not disclose each and every claim element. Pet. 26 n.1. As noted previously, Bennett has an identical disclosure to Bennett '719 (EX2005), expressly considered and applied during prosecution of the '242 Patent, which the '242 Patent's claims overcame. Petitioner now relies on conclusory expert testimony to backfill Bennett's shortcomings, but the evidence is insufficient.

**1. USPTO Properly Considered Bennett**

Petitioner relies on Bennett (EX1005), a continuation publication with an identical disclosure to Bennett '719 (EX2005), which was considered during prosecution. Bennett '719 was first cited in the initial Office Action (EX1004 52), and later applied against dependent claims 3 and 12 in combination with other

references in a Final Action. *Id.* at 241, 245, 246. Further, in the Examiner's Answer to Appeal Brief, the Office previously considered and cited Bennett '719's teaching of a gravity-fed bird feeder. EX1004 328–329.

Petitioner contends that the Examiner failed to properly consider Bennett, as being applied only to dependent claims, and not as a primary reference against independent claim 1. Pet. 26, n.1. This is contradicted by the record and Petitioner provides no other basis for the Examiner to have committed material error.

During examination, the Examiner view Bennett as “pertinent” art. EX1004 52. Each subsequent Office Action considered Bennett, and the Examiner applied it against dependent claims in a Final Office Action. EX1004 241, 245, 246. Accordingly, Petitioner cannot argue Bennett was overlooked. Instead, the Examiner considered Bennett carefully, understood its teachings, and applied it to dependent claim 3. *See, e.g.*, EX1004 241, 245–246. Dependent claims necessarily incorporate each and every limitation of its independent claim. Thus, the Examiner considered Bennett for each element of claim 1 in analyzing claim 3. Further, the Examiner continued to apply Bennett after several rounds of office actions and a first appeal, which underscores the Examiner's awareness, reevaluation, and application of Bennett.

Additionally, in the second appeal, the Board acknowledged Bennett (EX1004 343), noting that the Examiner did not expressly rely on Bennett to teach the limitations of claim 1. EX1004 349. The Board could have, but did not, formulate a new ground of rejection based on Bennett, consistent with 31 C.F.R. § 41.50(b). Instead, the Board decision noted that certain elements of claim 1 were lacking in the art cited against it, and those elements were not cited as being provided by Bennett. EX1004 349. The Board, with full knowledge of the pending claim 1, as well as Bennett's teachings, declined to present a new ground of rejection based on Bennett, and instead reversed the Examiner's decision rejecting claims 1 and 3, affirming that Bennett does not disclose each and every element of claim 1.

Petitioner relies on its own generalized statements concerning the Petition's merits in arguing that Bennett teaches all limitations of claim 1 and claim 3 as part of Ground 1, even though it has relied on Bennett as a single § 103 reference, implying that Bennett does not disclose every element. Pet. 26 n.1. Petitioner's generalized argument that "material error" occurred during prosecution (Pet. 26) dissolves into a simple disagreement with the Examiner's and the Board's well-reasoned judgment and therefore warrants denial.

As discussed below, Bennett does not teach each and every limitation of claim 1.

**2. Bennett does not teach “the bird feeder comprising ... the camera internally mounted to the bird feeder” (claim 1(e))**

Petitioner misconstrues the teachings of Bennett, particularly with reference to the location or manner of mounting Bennett’s imaging sensors 113<sup>1</sup>. Petitioner states “[Bennett’s] cameras (112) *may be located in the cap of the bird feeder or nested along or in the sides of the bird feeder*, as shown in FIG. 1A. (EX1001 ¶¶37-40; EX1005 ¶49).” Pet. 28 (emphasis added). Petitioner also relies on its expert’s declaration, which similarly mischaracterizes Bennett and relies on circular logic, stating “...the cameras are internally mounted. POSITA would have been able to tell the cameras were internally mounted because the cameras that are mounted in the caps are mounted inside the caps and protrude outward....” EX1001 ¶101.

Petitioner’s and its expert’s reading of Bennett fail even under their construction of “internally mounted” which requires at least a portion of the component be “inside and mounted to” the bird feeder. Bennett’s Figures 1A and 3A (EX1005), (Pet. 55-56) (reproduced below) *do not* show or teach imaging sensors 113 *internally* mounted *in* the cap 136, nor *internally* mounted into the sides of the vessel 101 of the bird feeder.

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<sup>1</sup> Bennett interchangeably numbers the imaging or audio sensors as 112 and 113; compare [0078] with [0081] of US Publ. 20160106072.

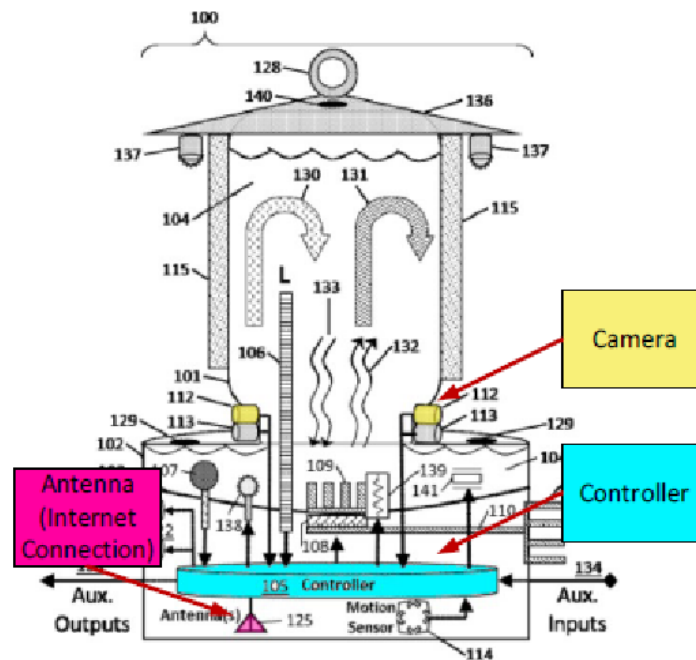


FIG. 1A

(EX1005, annotated FIG. 1A (Pet. 56))

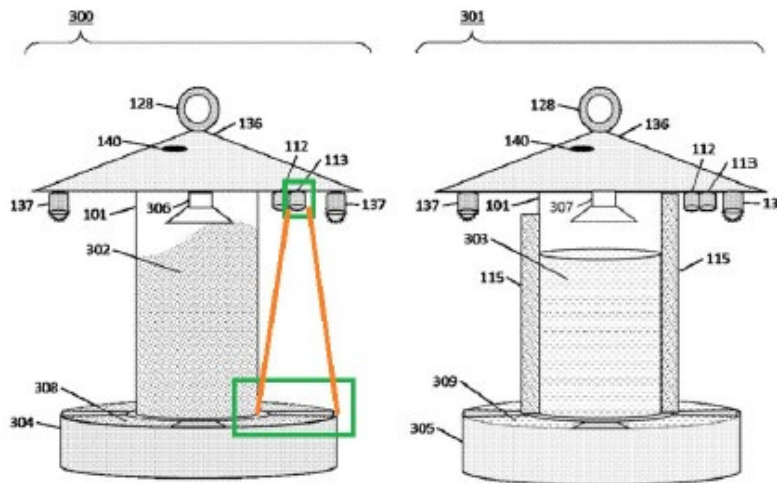


FIG. 3A

(EX1005, annotated FIG. 3A (Pet. 55))

Instead, with reference to Bennett's Figures 1A and 3A, the imaging sensors 113, as depicted, appear to be merely *surface* mounted, and not provided "*in* the cap of the bird feeder" nor "*in* the sides of the bird feeder." This is not "inside or mounted to" the bird feeder. Rather, Bennett's imaging sensors 113 are shown as positioned on a support *surface*, such as the underside of the cap 136 in Figure 3A, or sides of the vessel 101 in the schematic view of Figure 1A. Moreover, Bennett specifically identifies Figure 1A as depicting the invention "in schematic form that is not drawn to scale" (EX1005 ¶39), and therefore Petitioner's expert is simply inferring details that are not there, and provides only conclusory statements with no basis for his testimony. "[D]rawings can be used as prior art, without referring to the surrounding description, only if the prior art features *are clearly disclosed* by the drawing." *PlaSmart, Inc. v. Kappos*, 482 F. App'x 568, 572 (Fed. Cir. 2012) (emphasis added).

To be sure, Petitioner's expert's reading is contradicted by the specification. Bennett discloses "[t]he cap 136 may also be fitted with electrical loads [...] or fitted with sensors such as, but not limited to, audio 112 and imaging 113 sensors depicted mounted *to* the cap 136 in FIG. 3A." EX1005 ¶40 (emphasis added). Accordingly, an inference that Bennett provides imaging sensors 113 that could be considered internally mounted is simply unsupported by Bennet's teachings, particularly where

the specification clearly indicates otherwise, specifying the imaging sensors 113 are not mounted *in*, but rather are “mounted *to* the cap”. *Id.* (emphasis added).

Petitioner argues that Bennett’s “...camera is internally mounted at least because it is mounted in and to the cap, (EX1001 ¶101). (EX1001 ¶101).[sic]. As POSITA would have known, mounting in this way requires at least some of the mounting elements to be run through (internal) to the feeder.” Pet. 54. Such argument is not persuasive, as a *mounting element*, even if provided internally, does not satisfy the limitation that the *camera* is mounted internally as claimed. Moreover, Bennett only depicts a surface mounting of the camera (imaging sensor 113) in Figs. 1A, 3A, and 4A and in ¶¶040, 073. Many other mounting methods at the time of the invention were possible, such as the use of an adhesive or hook and loop material, to secure an imaging sensor 113 to the underlying support surface, as depicted in the Figs. 1A and 3A of Bennett. To argue that the camera is internally mounted, despite such feature not being shown or contemplated by Bennett, is mere reliance, without evidence, on hindsight reconstruction to achieve that which is not taught.

Petitioner further attempts to argue that Bennett provides an internally mounted camera, pointing to:

the embodiment of FIG. 1A, which shows the camera (image sensor 112) mounted beneath the feed reservoir portion of the device, and

facing outward toward the feed ports (129). (EX1001 ¶¶101-103; EX1005 at FIG. 3A). The camera is mounted to the interior at least because it is within a space defined by the bottom and reservoir, which surround it, and because, as shown by the black arrows to the controller, it is coupled to the controller, which means the camera is coupled to an interior element. (*Id.*)

Pet. 55.

However, this statement misinterprets the schematic diagram of Fig. 1A, and misapplies the claim language. Bennett's Figure 1A identified by Bennett as a schematic diagram (EX1005 ¶012) shows interrelationships between components, not exact placement of components. Nevertheless being "within a space defined by the bottom and reservoir," Pet. 55, is not "internally mounted" to the bird feeder as claimed. Being located spatially within the circumference of the bottom of the feeder is not integrated into the feeder itself. Moreover, the black arrows of Fig. 1A depict electrical leads or signal communication paths, connecting a camera 113 to the controller 105, not physical mounting or securing the camera itself internally. *See, e.g.,* EX1005 ¶¶40, 47, 51. The black arrows of Fig. 1A may also represent flexible wires used to conduct electrical signals, so as to allow the controller 105 and camera 113 to electronically communicate, and not serving as physical securement. *See, e.g.,* EX1005 ¶¶40, 47, 51. Electronic coupling does not satisfy the claim language that the *camera* be internally mounted to the bird feeder as required by claim 1. Petitioner's expert's testimony that "black arrows are shown connecting the cameras

to the controller” somehow requires “that the camera be mounted (e.g., tethered) by a connection between it and the controller” is not only conjecture, but also leaves out the key limitation that the camera be “internally” mounted. EX1001 ¶101. Thus, his opinion is beside the point and provides no basis for structural support, and when the “black arrows are shown connecting the cameras to the controller,” *id.*, they more likely represent electrical coupling.

Petitioner argues it would be obvious to use a bracket or similar device as the internal portion of the mount for the camera. Pet. 57. This argument fails. First, even if brackets and fasteners could be used to secure the camera, such features still do not satisfy the claim language that the *camera* is internally mounted, as claim 1 requires. In the Petitioner’s proposed modification, only a bracket connected to the camera, not *the* camera, is mounted internally. Pet. 57. Second, Petitioner relies on Dr. Clark’s opinion, which are conclusory statements that do not support modifying the disclosures and teachings of Bennett. At most, he is advocating a particular design choice that he claims, without support, would “provide stability to the camera and to keep the wires attached.” EX1001 ¶103. But he has not shown how this particular design choice is any more advantageous than the teachings of Bennett that already teach the camera is stable and wires are attached. *See Ex parte Maeda*, Appeal No. 2010-09814, Slip op. at 6-7 (Oct. 23, 2012) (discouraging examiners

from relying on “design choice” because it is generally mere conclusion, which is no substitute for obviousness based on factual evidence). Petitioner provides no reason why a bracket would better support the camera when other external mounting methods described above clearly exist; Petitioner’s reasoning cannot support an obviousness rationale. *See Virtek Vision Int’l ULC v. Assembly Guidance Sys., Inc.* 97 F.4th 882, 888 (Fed. Cir. 2024) (“It does not suffice to simply be known. A reason for combining must exist.”).

Claim 1 of the ‘242 Patent requires “...the camera *internally mounted* to the bird feeder” such that it “is aligned with the feed port to observe feeding birds.” EX1003 claim 1 (emphasis added). This limitation is simply not taught, nor suggested by Bennett, nor has Petitioner provided any credible evidence to modify Bennett to arrive at the claimed invention. Petitioner instead relies on hindsight bias. Accordingly, Petitioner’s challenge of claim 1 must be denied.

**3. Bennett does not teach “the bird feeder comprising ... an internal power source” (claim 1(g))**

Additionally, Bennett does not teach “the bird feeder comprising ... an internal power source.”. To suggest otherwise, Petitioner and its expert rely on Bennett at ¶58, but in doing so, they both misquote Bennett’s disclosure relating to a power management module in concluding an internal power source is taught. Pet.

59; EX1001 ¶106. When read correctly, Bennett clearly teaches an external power source:

| Pet. 59; EX1001 ¶106                                                                                                                                                                                                                                                                                 | EX1005 ¶58                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>“The power management module 203 receives power <i>from...</i> a connection to a stored 217 power source (e.g., battery, supercapacitor), and conditions and transforms it to supply the voltages and currents required by the modules comprising the controller 105.</p> <p>(emphasis added)</p> | <p>The power management module 203 receives power <i>through a connection</i> to a generated 216 power source (e.g., transformed household line power, fuel cell, solar power, wind power) or <i>through a connection</i> to a stored 217 power source (e.g., battery, super capacitor), and conditions and transforms it to supply the voltages and currents required by the modules comprising the controller 105.</p> <p>(emphasis added)</p> |

Bennett explains that the power module 203 is an integrated circuit (EX1005, ¶58) which does not itself provide power, but rather must receive power from one of two sources, a generated 216 power source or a stored 217 power source (*id.*; *see also* Fig. 2A). Both sources 216, 217 are external to the feeder. *Id.* Bennett provides an example of a generated power source 216—a 12-volt, 60-watt module power supply. *Id.* ¶59. If generated power fails, Bennett contemplates “one or more power storage devices in the form of e.g., batteries, super capacitors, etc. may be coupled to the station through the stored 217 power input.” *Id.* The disclosed sources of power 216, 217 are therefore both external. The power management module 203 cannot be considered an “internal power source” because it is not itself a source of power; it merely conditions and transforms received power to the voltages and currents required by the electronic components controlled by controller 105. *Id.* ¶58.

As an alternative basis for obviousness, Petitioner contends—without meaningful explanation—that it would have been obvious to place a battery inside the feeder housing of Bennett “to weatherproof the battery and to protect the battery from external forces. (EX1001 ¶¶106-107)”. Pet. 59. Dr. Clark merely parrots this assertion. EX1001 ¶107. As with Petitioner’s other obviousness rationales, this rationale rests on improper, conclusory expert testimony. *See Ex parte Maeda* at 6-7.

Bennett, for example, discloses substantial power requirements, including resistive heating to prevent freezing during extended winter exposure, cooling, anti-infectious agent treatment with UV emitters, piezo-electric ultrasonic transducers, remotely visible status lights, and auxiliary outputs for powering area lighting and speakers. EX1005 ¶¶42-52, 90. Petitioner’s obviousness rationale fails to consider whether a battery capable of meeting these demands—such as the 12-volt, 60-watt power supply taught in Bennett (*id.* ¶59)—could physically fit inside Bennett’s feeder housing, where it would be located among other required components, or how such a large power source could be enclosed without exposure to water or other deleterious environmental effects.

In the embodiments depicted in Fig. 10A-D, Bennett shows power is delivered from an external source: “[p]ower 1000 supplied from an external source is conducted through power wiring 1001 that is routed through a hole near the lower end of the station support pole 1003 upon which the solid sustenance station 400 is mounted. The power wiring 1001 is connected to the controller electronics within the feeding tray 401.” *Id.* ¶107. Bennett teaches several embodiments where external sourced power is delivered to the invention via power wiring 1001. *Id.* 107-109. There is simply no indication that Bennett, or a POSITA, contemplated relying on an internal power supply within the feeder to meet the electrical demands required

to power the heating elements, much less all the other loads Bennett contemplated, through extremely cold winter environments to prevent freezing for improved feeding with liquid sustenance. Bennett therefore does not disclose or render obvious “the bird feeder comprising ... an internal power source” of claim 1.

In sum, Bennett at least fails to teach the preamble’s “a self-contained bird feeder” and claims 1(e) and (g). Because Petitioner failed to show Bennett renders obvious independent claim 1, Petitioner necessarily fails to show that dependent claim 3 is obvious as well. Accordingly, institution of Ground 1 should be denied as lacking any reasonable likelihood of success on the proposed invalidity rationale.

**B. Grounds 1A (Bennett in view of Rofougaran) and 1B (Bennett in view of Bevan, Raspberry Pi 2 Model B) Do Not Render Obvious Claims 2, 4-6**

Because Petitioner failed to show Bennett renders obvious independent claim 1, Petitioner necessarily fails to show that dependent claims 2, 4–6 are obvious as well.

In Ground 1A, Petitioner’s reliance on Rofougaran for a WiFi dongle (EX1009) does not cure the deficiencies of Bennett. *See, supra*, §V.A.1-3. Similarly, in Ground 1B, Petitioner’s reliance on Bevan for a Raspberry Pi Controlled Camera Shutter Release (EX1010 5), and the Raspberry Pi Model B specification (EX1010 12) to disclose (1) “a processor; a display connector; a multi-media interface; an audio/video jack; and an ethernet socket,” as claimed by claim 4; (2) a “a micro-

USB socket and a USB port,” as claimed by claim 5; and (3) an “HDMI port” and claimed by claim 6, Pet. 65–71, does not cure the deficiencies of Bennett. *Supra*, §V.A.1-3. Petitioner ***does not*** rely on Rofougaran, Bevan, and Raspberry Pi 2 Model B to remedy the shortcomings of Bennett; instead, Petitioner relies on these references to disclose limitations in claims ***depending*** from claim 1—here, claims 2, 4–6. Petitioner’s combined references do not disclose the claim 1 elements identified above missing from Bennett to render obvious claim 1. Accordingly, Grounds 1A and 1B fail for the same reason as Ground 1.

**C. Ground 2 – Petitioner fails to show that the challenged claim 1 is obvious over Bonham**

Turning to Ground 2, Petitioner’s challenge must be denied because Petitioner has cited non-analogous art in Bonham, and further, Petitioner is unable to show that Bonham teaches all of the limitations recited in challenged claim 1.

**1. Bonham is non-analogous art**

A reference may be used in an obviousness determination when it is analogous to the claimed invention, which means (1) it is from the same field of endeavor, or (2) if it is not from the same field of the inventor’s endeavor, it is reasonably pertinent to the particular problem with which the inventor is involved. *In re Oetiker*, 977 F.2d 1443, 1446–47 (Fed. Cir. 1992). This requires a consideration of a reference’s disclosure in view of the “reality of the circumstances,” and weighed

with “common sense” from the vantage point of a POSITA and the fields they “would reasonably be expected to look for a solution to the problem facing the inventor.” *Id.* at 1447; *see also United Laboratories Int’l, LLC, v. Refined Techs., Inc.*, IPR2019-01544, Paper 9 at 11 (PTAB Jan. 22, 2022) (denying institution and finding prior art not analogous); *Polygroup Limited v. Willis Elec. Co.*, IPR2016-01609, Paper 16 at 35 (PTAB Feb. 26, 2018) (finding prior art was not analogous), *aff’d*, *Polygroup Ltd. MCO v. Willis Elec. Co., Ltd*, 759 F. App’x 934, 942 (Fed. Cir. 2019).

Petitioner does not address whether Bonham is analogous art or in the same field of endeavor as the ’242 patent, or whether it is reasonably pertinent to the problems addressed by the ’242 patent. This alone should be fatal to the Petition. *See In re Nat. Alternatives, LLC*, 659 F. App’x 608, 614 (Fed. Cir. 2016) (to satisfy the burden of showing why a patent is obvious, the party must “explain why a [POSITA] would have found the prior art to be ‘reasonably pertinent to the problem with which the inventor was concerned.’”). As explained below, Bonham fails both prongs: it is not from the same field of endeavor as the ’242 Patent, and it is not reasonably pertinent to the particular problem the ’242 Patent solves. Thus, Bonham is non-analogous art and cannot be used in an obviousness analysis.

First, Petitioner does not assert that Bonham is in the same field as the '242 Patent (*See* Pet. 29-30, and 72-73); it is not. Bonham is directed “to methods and apparatus for fostering a broad citizen scientist effort to acquire long-term and scientifically valid biological data on the behavior and timing of cavity-nesting birds and other wildlife by taking advantage of the popular appeal of cameras in backyard birdhouses and adding precise scientific instruments that acquire data on feeding rates and other behaviors that can be uploaded to centralized databases.” EX1006 ¶001. The '242 Patent is directed to a system and method of providing improved bird feeders, especially self-contained bird feeders capable of providing streaming video. EX1003 1:31-33. Bonham does not relate to bird feeders or observing birds at bird feeders in real time.

Further, the title of the '242 Patent explains it is directed to Self-Contained Bird Feeder with Camera and Streaming Video. *Id.* The purpose of the claimed bird feeder is to provide a bird accessible food supply that the bird is capable of consuming on its own, and enable the capture and transmission of images and video of birds as they approach, access the feed ports where the feed is accessible, and depart from the feeder. Thus, the '242 Patent has a field of endeavor that can be characterized as bird feeder systems incorporating technology that allows monitoring of feeding by birds at a feed port providing access to a source of food.

Bonham, by contrast, does not describe any sort of bird feeder and does not provide a food supply for birds; rather, Bonham provides a nesting habitat that allows studying of occupants within the nesting habitat, potentially including how the adults feed their young. EX1006 ¶4. Here, Bonham merely provides a birdhouse, not a bird feeder as required, and further, the camera of Bonham is internally directed to occupants of the birdhouse to monitor when and how birds are migrating and nesting, not to take photos of birds accessing provided feed.

Petitioner states in a conclusory manner that “[t]he bird house of Bonham is the bird feeder.” Pet. 74. This is not supported by any reasonable understanding of a “bird feeder” (having the following definition: “a device containing nuts or seeds for wild birds to eat.” (EX2011)), which is a term that has universally understood plain and ordinary meaning as providing a food source, accessible by wild birds, typically situated outside, with unrestricted access by the target birds that are capable of accessing feed from the port(s) the feeder provides. The use of the word “bird feeder” in the specification is consistent with this meaning. EX1003 2:7-14, 4:21-29, 5:9-10. Indeed, Petitioner goes to great lengths in the Petition to describe that bird feeders are generally known, demonstrating understanding of the term “bird feeder” by continually referencing feeders for wild birds that provide a food source and are positioned

outside. Pet. 12-15.

A bird feeder is not a birdhouse. *Compare, e.g.*, EX1003 Abstract (“A system and method are described for providing improved *bird feeders*” (emphasis added)) with EX1006 Abstract, ¶4 (differentiating the two: “Many, if not most homeowners have purchased and installed backyard birdhouses *or* birdfeeders. . . .” (emphasis added)). Notably, to the extent Bonham contemplates birds feeding at all, it is only in the context of the adult birds bringing food to their young chicks. EX1006 ¶4. But Petitioner does not rely on this disclosure. Instead, Petitioner cites to paragraph 6 to argue “[a]s Bonham explains, it is possible to use cameras inside birdhouses to monitor feeding rates, and this has been known since at least 2010. (EX1001 ¶¶130-132; EX1006 ¶6).” Pet. 74. The cited paragraph, however, is silent as to providing food supply accessible by birds, monitoring of bird feeding rates, and merely contemplates collecting valid biological data via cameras placed on birdhouses; the word “feeding” does not appear. EX1006 ¶6.

To the extent that Bonham even contemplates any feeding of birds, it is in the context of compiling and storing “feeding rates” by tracking how often the adult birds leave and enter the birdhouse. EX1006 ¶4 (emphasis added). The feeding rates indicate “the ability of *adult birds* to find food for *their young*” which serves as “a valuable indicator of the surrounding habitat quality and species health”. *Id.*

Thus, Bonham contemplates observing feeding rates through monitoring infant chicks nesting within a birdhouse as they are being fed by adult birds returning to the birdhouse, rather than providing a source of food for access by birds, i.e., a bird feeder. Such teachings, however, do not bring Bonham into the field of relevant, analogous art.

Nor is the Bonham reference reasonably pertinent to the problem solved by the '242 patent. To show that a reference is “reasonably pertinent,” a petitioner must show that a POSITA would reasonably have consulted the reference in solving the “particular problems” confronting the inventor. *Chemours Co. FC, LLC v. Daikin Indus.*, 4 F.4th 1370, 1376 (Fed. Cir. 2021). Petitioner failed to meet its burden here.

The '242 Patent's built in camera is internally mounted to the bird feeder, but oriented to the exterior of the bird feeder, by being aligned with the feed port, to capture images and video of feeding birds as they access the food source by interacting with the feed port. EX1003 4:21-29, 7:1-11.

In contrast, Bonham's birdhouse addresses a fundamentally different problem. Any camera Bonham provides is to be oriented internally, rather than oriented externally, monitoring the behavior of adult birds, and the brood of chicks, once hatched, while remaining within the birdhouse's enclosure. Further, Bonham is not concerned with providing an accessible food supply for the birdhouse

occupants, nor deals with the environmental concerns of providing an accessible food supply to birds that would entice birds to feed and be live streamed.

The fact that both Bonham and the challenged patent involve both birds and cameras does not establish a rationale to look to the Bonham birdhouse with internal monitoring capability, if one were looking to develop the bird feeder as claimed in the challenged patent.

Second, Petitioner argues “it would have been obvious to POSITA to include bird feed in [Bonham’s] birdhouse because bird feed could be easily placed in the feeder bottom and on the base of the birdhouse, which would attract birds to the birdhouse and allow the bird house to function as a feeder.” Pet. 74. To do so would be contrary to the stated purpose of a birdhouse, as the reason for occupying the birdhouse in Bonham is to nest therein. EX1006 Abstract, ¶4. Petitioner cites no basis for converting a space for nesting into a place for storing feed for access by occupant birds, and it defies common sense. Simply, birds *nest and raise their young in a birdhouse, as provided by Bonham*. EX1006, Abstract and ¶004 . This requires the bird to bring nesting material into the birdhouse, so as to construct the bird nest within the birdhouse. EX1004 ¶004, *also see* EX2012. The nesting material brought in would necessarily cover any food placed in the bottom of the birdhouse, if provided as proposed in the Pet. at 74. Moreover, any food source, as a natural

consequence of remaining underneath a bird nest would be subject to spoliation, contamination, and predictably leading to disease as the feed rots, attracts pests, vermin, and/or predators into the interior of the birdhouse. Such circumstances would be quite contrary to the intention in providing a birdhouse taught by Bonham, intended to shelter birds and allow for monitoring developmental activities of the nesting birds, including adult birds finding food for their young to assess surrounding habitat quality, by monitoring the food brought for their young. EX1004 ¶004. Petitioner fails to establish a the requisite motivation by a POSITA to modify the teachings of Bonham such that it could function as a bird feeder, as to do so would be potentially harmful to the birdhouse occupants (*see* EX2013), and contrary to the stated purpose of Bonham in providing an invention that fosters broad citizen scientist effort in monitoring bird behavior (EX1006 ¶001) and allowing homeowners to watch the development of baby birds in their backyard. *Id.* ¶5. Therefore, Bonham would not “logically ... have commended itself to an inventor’s attention in considering his problem.” *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992); *see generally* MPEP § 2141.01(a). Accordingly, Bonham cannot be considered for obviousness because it is not analogous art.

Lastly, the Petition misleadingly uses “*Id.*” to suggest that Bonham discloses placing bird feed in a birdhouse. The Petition first cites Bonham (EX1006) and an

expert declaration (EX1001) for the proposition that “Bonham includes an ‘internet-connected computer in the form of the microcontroller (2) where the data can be uploaded and added to centralized databases. EX1001 ¶¶130-132; EX1006 ¶¶13-14. The camera is the image sensor built into the birdhouse. (*Id.*)” Pet. 74. The Petition then states “it would have been obvious to POSITA to include bird feed in the birdhouse because bird feed could be easily placed in the feeder bottom and on the base of the birdhouse, which would attract birds to the birdhouse to function as a feeder. (*Id.*)” Pet. 74. Petitioner’s use of “*Id.*” here improperly implies that Bonham ¶¶13-14 support the obviousness of placing bird feed in the birdhouse. They do not. Those paragraphs merely describe the purpose of the invention and the components shown in Fig. 1 and contain no disclosure of placing bird feed in the bottom of a birdhouse. EX1006 ¶¶13-14. This same error appears throughout the obviousness contention of this Ground. Pet. 74.

**2. Prior USPTO Review of Substantially Similar Art Confirms That Bonham Does Not Satisfy the “Bird Feeder” Limitation of Claim 1**

Bonham (EX1006) discloses a birdhouse with a camera 4 positioned above the interior and oriented to monitor the inside housing. EX1006 Abstract, Fig. 1. Bonham is substantially similar to—and cumulative of—U.S. Patent No. 9,137,974 (EX2006 “Boehm”), which the Examiner identified as pertinent art (although, as established above, is non-analogous). EX1004 52. Boehm provides a sensor 2640

which may be a camera or webcam (EX2006 C5;L8-9) for “...automatically detecting the presence of a bird in a housing. The housing can be adapted to substantially surround the bird. The housing can define an aperture adapted for the bird to enter and exit the housing.” EX2006, Abstract.

Like Bonham, Boehm provides a housing 1100 with an aperture 1700 sized for bird passage (*Id.* 1:34-38), and provides a sensor 2640, such as a camera (*Id.* 5:8-9) positioned above the enclosure interior, for monitoring the interior of the housing to detect birds within the housing. *Id.* 3:1-3, Figs. 1, 2 (reproduced below, right).

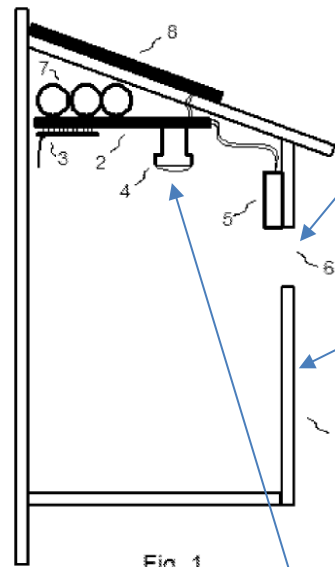


Fig. 1

Camera  
Sensor

Aperture

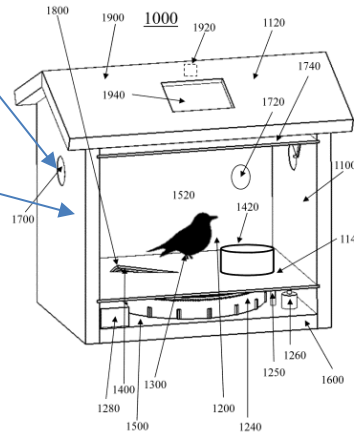
Housing

U.S. Patent

Sep. 22, 2015

Sheet 1 of 5

US 9,137,974 B2

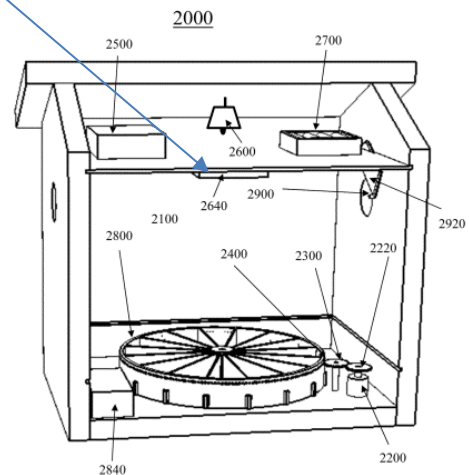


U.S. Patent

Sep. 22, 2015

Sheet 2 of 5

US 9,137,974 B2



For purposes relevant to claim 1 of the '242 Patent, Boehm and Bonham are therefore substantially similar and disclose duplicative teachings.

The Office did not make a material error in allowing the '242 Patent over Boehm. Petitioner, now raising Bonham, presents substantially duplicative art. Petitioner attempts to circumvent the Examiner's judgment by proposing a new reference that is cumulative to Boehm in all material aspects relevant to the claims of the '242 Patent. The Examiner's decision to minimally cite to Boehm is reasonable in light of Boehm not teaching nor suggesting several limitations of the '242 Patent's claims, as described in detail below. Boehm, like Bonham, would not be considered to provide, for example, a bird feeder having a feeder housing, a feeder bottom, and a feed port disposed on the feeder bottom, with a camera disposed in close proximity to the feed port, as required in originally filed claim 1 of the '242 Patent. EX1004 30–32. Accordingly, there is no material error in the Office's earlier consideration of Boehm, and Petitioner likewise has not shown Bonham teaches each and every limitation of claim 1.

**3. Bonham does not teach the “a bird feeder” claimed in claim 1 or its claimed structural elements (claim 1(pre) and 1(a)-(d)).**

To find a claim as obvious in light of a single reference, it must “have been obvious to modify that reference to arrive at the patented invention.” *Arendi*, 832 F.3d at 1361 (Fed. Cir. 2016). For Ground 2 (Pet. 71-83), Petitioner raises Bonham (EX1006) alone against claim 1.

Bonham fails to even provide “a bird feeder” as claimed, and instead provides a birdhouse, as described above. *See, supra*, §V.C.1-2. Bonham therefore does not disclose the structural elements of “the bird feeder comprising: a. a feeder housing; b. a feeder bottom; ...” etc. as claim 1 claims.

Even assuming that Bonham could be considered to provide a feeder enclosure, Bonham still does not disclose “the bird feeder comprising ... a feed port disposed on the feeder bottom” as required in claim 1. Petitioner argues “Bonham discloses a feed port which is the entrance hole (6) of the birdhouse. (EX1001 ¶¶135-136; EX1006 ¶¶13-14).” Pet. 77. This is incorrect, as the entrance hole 6 of Bonham is provided to allow passage of a bird through the opening, not an opening for feed access.

Petitioner further appears to acknowledge that the cited port of Bonham is not disposed on the feeder bottom, contending that it would be obvious to move the location of the feed port as a “simple substitution of one location for another”. Pet. 78. Petitioner’s obviousness rationale, however, does not address why POSITA would be motivated to move the entrance hole 6 of Bonham to a location that would open the bottom of the birdhouse and impair nest formation in the bottom of the birdhouse. Further, the ’242 Patent teaches that feed is to flow by gravity from the food source, down to the feed port. EX1003 2:38-40. Petitioner’s obviousness

rationale also does not address why Bonham's opening 6, sized for passage of a bird therethrough, would be positioned at the bottom of the birdhouse housing of Bonham, if such a large opening at the bottom would allow the feed content Petitioner asserts could be provided within Bonham's birdhouse to flow freely out of the bird sized passage opening 6. Petitioner's poorly developed obviousness rationale fails to fully establish why and how POSITA would make such a modification without significantly impairing the functionality of the birdhouse of Bonham such that its proposed modification defies common sense and lacks support.

**4. Bonham does not teach “the bird feeder comprising ... the camera internally mounted to the bird feeder such that the camera is aligned with the feed port to observe feeding birds” (claim 1(e))**

Because Bonham does not teach a bird feeder, Bonham does not satisfy this element. *See, supra*, § V.C.1-2. The camera 4 of Bonham is aligned to view the interior of the birdhouse (EX1006 ¶14), not the entrance hole 6. *Id.* The Petition quotes the language of claim 1 and broadly asserts that the sensor and lens 4 disclosed in Bonham are “aligned with the feed port to observe feeding birds” (Pet. 79-80), but does not even attempt to show how Bonham would be capable of viewing the feed port within the camera 4 field of view, which is clearly directed downwards and into the interior of the birdhouse to observe nesting bird “activity inside the birdhouse”. EX1006 ¶14. Further, Bonham already provides a motion sensor 5 to

monitor the comings and goings through the entrance hole 6 (*id.*), so POSITA would find no reason to adjust Bonham's camera 4 such that the aperture 6 fits within the field of view of camera 4. Bonham therefore also clearly does not teach or render obvious this limitation in claim 1.

**5. Bonham does not teach “a bird feeder with a built in ... internet connection, the bird feeder comprising ... a WiFi adapter located within the feeder housing” (claim 1(a), 1(h))**

Because Bonham does not teach a bird feeder, Bonham also does not satisfy this element. *See, supra*, §V.C.1-2. Bonham fails to provide the required internet connection, and instead, merely provides a method of communicating with a computer which is “a two-way wireless transceiver 3.” EX1006 ¶14. However, the two-way transceiver of Bonham does not itself provide an internet connection, establishing instead a route of communication to an external computer. *Id.*

Petitioner argues that “Bonham includes an “internet-connected computer in the form of the microcontroller (2) where the data can be uploaded and added to centralized databases. (EX1001 ¶¶130-132; EX1006 ¶13-14).” Pet. 83. Bonham's teachings do not support this, as Bonham ¶13 is silent as to a bird feeder with an internet connection and instead merely discloses a “camera-equipped birdhouse with sensors, a data-logger and the ability to download images and data to a computer.” Further, Bonham ¶14 is also silent as to an internet connection, and instead Bonham states “[o]ther elements of the invention include a method of communication with a

computer which in FIG. 1 is depicted as a two-way wireless transceiver 3.” EX1006

¶14. A connection to a single computer does not constitute an “internet connection.”

“Internet-connected” requires connectivity to the Internet itself (i.e., a network of networks using internet protocols that enables access beyond a closed, local system), not merely a direct or local communication link between two devices.

As a separate and independent defect, Petitioner conflates Internet connectivity of a separate computer with Internet connectivity of the birdhouse itself. Although Bonham discloses that the two-way transceiver (3) connects the birdhouse (1) to a computer, and that the computer is “Internet-connected,” that computer is plainly distinct from the electronic circuit board (2) of the birdhouse. *See* EX1006 ¶14. Nevertheless, Petitioner erroneously cites the electronic circuit board (2) as a “microcontroller (2) where the data can be uploaded and added to centralized databases”. Pet. 74. Establishing that a computer separate from, external to, and merely in communication with the birdhouse 1, has Internet connectivity does not establish a “WiFi adapter located within the feeder housing” cited as the birdhouse 1 of Bonham. In fact, Bonham teaches the opposite: the birdhouse 1 itself is not connected to the Internet and does not require a WiFi adapter within the birdhouse 1 because Internet connectivity resides solely in the separate computer connected by the two-way transceiver 3.

Petitioner has grossly mischaracterized Bonham's teachings, twisting the language in an attempt to satisfy a claim limitation by further stating that "[t]his transceiver must be internet-connected because Bonham includes an internet-connected computer" (Pet. 83). Bonham provides a two-way wireless transceiver 3, which may communicate with computer as described above, but the transceiver 3 itself clearly does not establish an internet connection. EX1006 ¶14. Accordingly, Bonham does not teach or render obvious this limitation of claim 1.

**D. Grounds 2A (Bonham in view of Rofougaran), 2B (Bonham in view of Bennett Humphries), and 2C (Bonham in view of Bevan and Raspberry Pi 2 Model B) Do Not Render Obvious Claims 2-6**

Because Petitioner has failed to show that Bonham renders obvious independent claim 1, Petitioner necessarily fails to show that dependent claims 2–6 are obvious.

In Ground 2A, Petitioner's reliance on Rofougaran for a WiFi dongle (EX1009) to argue that this combination teaches the limitations of claim 2, Pet. 84–86, does not cure the deficiencies of Bonham alone. *See, supra*, § V.C.1-5.

Similarly, in Ground 2B, Petitioner's reliance on Bennett as providing a separator barrier between the feed and electronics of Bonham, Pet. 87–88, further combined with Humphries (EX1008), asserted as providing a hopper allowing gravity to facilitate the flow of feed, to argue that this combination discloses the

limitations of claim 3, Pet. 88, does not cure the deficiencies of Bonham alone. *See, supra*, § V.C.1-5.

Last, for Ground 2C, Petitioner relies on Bevan for a Raspberry Pi Controlled Camera Shutter Release (EX1010 5), and the Raspberry Pi Model B specification (EX1010 12) to disclose (1) “a processor; a display connector; a multi-media interface; an audio/video jack; and an ethernet socket,” as claimed by claim 4; (2) a “a micro-USB socket and a USB port,” as claimed by claim 5; and (3) an “HDMI port” and claimed by claim 6. Pet. 88–93. This combination does not cure the deficiencies of Bonham. *See, supra*, §V.C.1-5.

Petitioner *does not* rely on Rofougaran, Humphries, Bennett, Bevan, and Raspberry Pi 2 Model B to remedy the shortcomings revealed by Bonham; instead, Petitioner relies on these references to disclose limitations in claims *depending* from claim 1—here, claims 2–6. Petitioner’s references do not disclose or supply the claim 1 elements identified above that are missing from Bonham to render obvious claim 1 of the ’242 Patent and teach the claimed invention. Accordingly, Grounds 2A–2C fail for the same reason as Ground 2.

**E. Ground 3 – Petitioner fails to show that the challenged claim 1 is obvious over Kin**

Petitioner’s challenge as to Ground 3 must be denied because Petitioner cite non-analogous art in Kin, and further, Petitioner fails to show that Kin teaches all of the limitations recited in challenged claim 1.

**1. Kin is non-analogous art**

Petitioner fails to address whether Kin is analogous art or in the same field of endeavor as the ’242 patent, or whether it is reasonably pertinent to the problems addressed by the ’242 patent. This alone should be fatal to the Petition. *See Nat. Alternatives*, 659 F. App’x at 614. As explained below, Kin fails both prongs of the analogous art test: 1) it is not from the same field of endeavor as the ’242 patent, and 2) it is not reasonably pertinent to the particular problem the ’242 patent is involved.

Petitioner does not contend that Kin is in the same field as the ’242 Patent (*See* Pet. 30-31, and 94-108), and it is not. Petitioner states:

Kin discloses a bird feeder because it is a pet feeder. (EX1001 ¶¶164-168; EX1007 ¶1). Kin covers a feeder that can be used with any particular type of pet. (EX1001 ¶¶164-168; cf. EX1007 ¶5). As a result, it would have been obvious to a POSITA to use the feeder to feed a pet bird because POSITA would have known that birds are common pets. (*Id.*)

Pet. 97. That assertion is not supported by any reasonable understanding of a “bird feeder.” EX2011; *see, supra*, §V.C.1. Indeed, Petitioner itself describes bird feeders

as generally known devices used to feed wild birds outdoors. Pet. 12-15. Accordingly, wild birds fed outside at a bird feeder are not pets, and the pet feeder of Kin adapted to feed pets that are left “at home” (EX1007 ¶3) is not from the same field of endeavor as the ’242 Patent bird feeder.

Kin is also not reasonably pertinent to the problem solved by the claimed invention of the ’242 Patent. Petitioner has failed to meet its burden.

The built in camera of the ’242 Patent is to be internally mounted to the bird feeder, but oriented to the exterior of the bird feeder, by being aligned with the feed port, so as to capture images and video of feeding birds as they access the food source by interacting with the feed port.

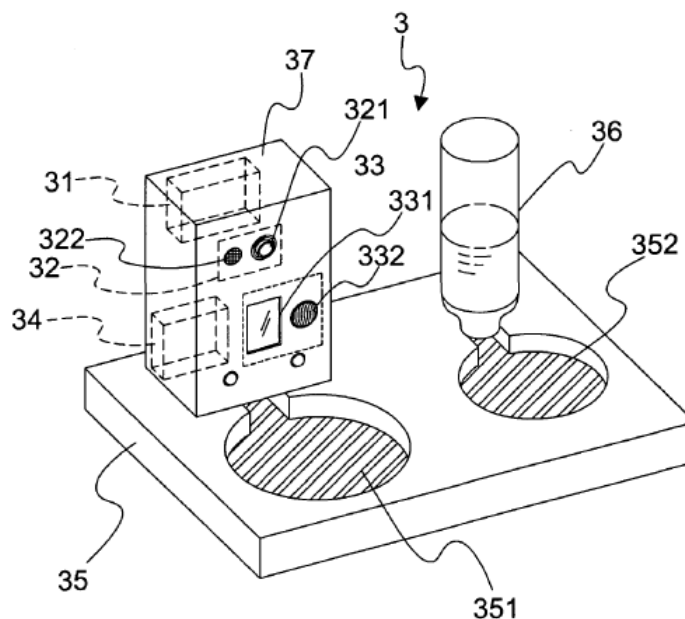
In contrast, Kin solves a problem with pets that are left at home, but still need to be fed at particular intervals to avoid food spoilage, and may miss regular interaction with their owners. EX1007 ¶¶2-4, 17, 18. Kin solves this problem by providing a video and audio connection between the owner and the pet while the owner administers food remotely at the appropriate time. *Id.* ¶¶17-19.

The disclosure of Kin is not applicable to the problems solved by the ’242 Patent’s bird feeder. Kin seeks to create an interactive environment that is encouraging for household pets, but such an auditory and visual interaction with wild birds feeding at a bird feeder would scare the wild birds, impairing the ability to

capture images and video. In fact, the invention of the '242 Patent provides improved viewing through images of birds that would not normally be accessible precisely because wild birds are typically scared by the presence of humans (EX1003 1:66-2:6 ; EX1004 279-281); the audio and video interactivity inherent in Kin would only add to the problem addressed by the '242 Patent. Further, Kin provides the ability for an owner to administer food at particular times, while a bird feeder provides a source of food that is not set on an hour-based interval but rather is only limited by the quantity contained within the feeder. Kin's interaction and user-controlled interval feeding disclosure would not "logically ... have commended itself to an inventor's attention in considering his problem." *Clay*, 966 F.2d at 659; *see generally* MPEP § 2141.01(a). Accordingly, Kin cannot be considered for obviousness because it is not analogous art.

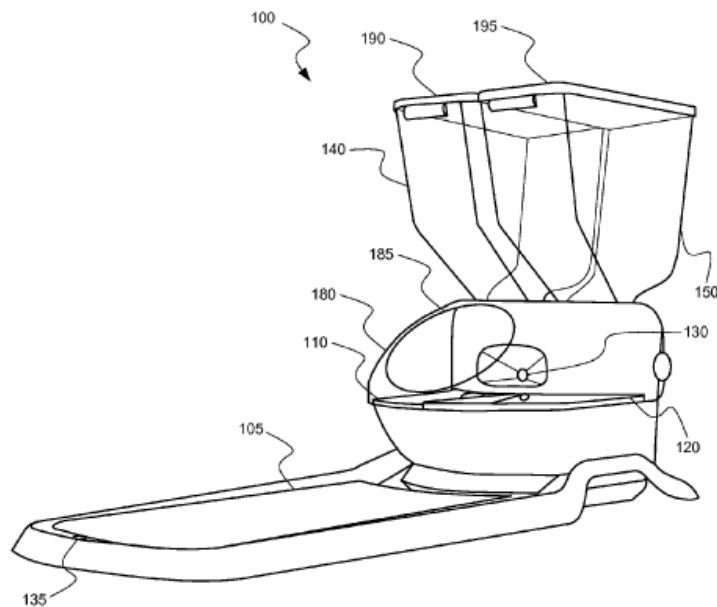
**2. Prior USPTO Review of Substantially Similar Art Confirms That Kin Does Not Satisfy the "Bird Feeder" Limitation of Claim 1**

Kin discloses a pet feeding station (see Fig. 2) (reproduced below) that provides food and water to pets by filling respective bowls, controllably supplying either food or water to each of the filling areas 351, 352 provided in base 35. EX1007 ¶15.



Kin also teaches “...the photo of the environment and the sound of the pet is sent to the operating device 1 through the image acquisition device 321 and the microphone 322 of the input unit 32 so that the pet raiser sees the environment and the status of the pet through the operating device 1...”. *Id.* ¶17.

Kin is substantially duplicative of U.S. Patent Application Publication No. 2015/0373925 (EX1019, “Sung”), which was repeatedly considered through prosecution of the ’242 Patent, including an appeal to the PTAB. EX1004 207–209. Sung likewise teaches a system for providing food to an animal, where the “system may include an animal scale, a food tray, a food scale, a water tray, a water scale, a facial camera, and a processor.” EX1019 ¶3, Figure 1 (reproduced below).



Sung discloses that “[t]he system may allow for an animal to be fed, watered, and their health monitored remotely by a user . . .” *Id.* ¶19. Sung, Fig. 2, depicts a pet feeder with separate food and water bins that each, respectively, supply the food and water when triggered to do so. Sung teaches a camera is provided “...for observing a face of the animal when the animal is facing at least one of the food tray or the water tray.” *Id.* ¶4. The teachings of Kin directed to a pet feeder system are substantially duplicative of the previously considered art of Sung in all material aspects.

Further, Petitioner’s arguments supporting Kin against the claims of the ’242 Patent are substantially similar to those the Examiner provided in citing Sung. The Examiner cited Sung as providing a “smart animal system that provide food and camera system that observed and identify animals, therefore Sung Smart Animal

Feeder system intended use can included bird, since bird is animals. [sic]”. EX1004 107. Patent Owner appealed the rejection, noting the Sung reference does not disclose the limitations of Patent Owner’s claimed bird feeder, failing to disclose a bird feeder at all; instead teaching a generic feeder that would not be understood as a bird feeder. *Id.* at 152. The PTAB decision decisively rejected the Examiner’s arguments noting, “[Sung] fails to provide written description support for subject matter related to bird feeders disclosed in Sung ‘945 and asserted against the present application. Although the Examiner has asserted that birds may be a well-known type of pet, other than cats and dogs, the ‘461 Provisional provides no support for such a contention. In view of the forgoing, we find the prior art fails to disclose (under § 102) or to teach or suggest (under §103) each claimed limitation.” *Id.* 207–209. Thus, the Board recognized Sung as teaching a pet feeding station but provides no teaching of a bird feeder as required in claim 1 of the ’242 Patent. The Office, acting through the PTAB in its adjudicatory capacity, has previously determined that a general pet feeder, such as provided by Sung, is not a bird feeder, and does not render the claims of the ’242 Patent unpatentable.

Petitioner raises substantially the same argument in Ground 3 of the petition. Pet. 94. Petitioner states “Kin discloses a bird feeder because it is a pet feeder. (EX10001 ¶¶ 164-168; EX1007 ¶1).” Pet. 97. Petitioner’s arguments are therefore

substantially duplicative of Examiner's arguments in applying Sung, which the PTAB decisively rejected. EX1004 207–209.

Thus, to remain consistent with the Board decision, Kin may teach a remote interactive pet feeder but cannot be considered to provide a bird feeder. Where Petitioner cites Kin, it is in all material aspects to the claimed subject matter, substantially similar art, and relies upon similar arguments as raised with Sung, which were already rejected by the Board.

Petitioner does not argue against the Board's decision rejecting Sung; but in raising Kin, Petitioner attempts to relitigate the same issues and arguments raised with regard to Sung—which the Board rejected outright. Kin also teaches a generic pet feeder that does not identify birds. Consequently, Kin is duplicative art and, mirroring Sung, does not disclose the bird feeder taught by the '242 Patent.

**3. Kin does not teach does not teach the “a bird feeder” claimed in claim 1 or its claimed structural elements (claim 1(pre) and 1(a)-(d)).**

Kin does not disclose or teach “a bird feeder.” Petitioner asserts that “Kin discloses a bird feeder because it is a pet feeder.” Pet. 97. As noted above, that same logic was applied to Sung during prosecution and was decisively rejected by the Board. *See, supra*, § II.B. For at least this reason, Kin cannot be deemed to disclose the claimed “bird feeder” recited in claim 1. Accordingly, Kin's feeder does not satisfy the claim limitation requiring “a bird feeder with a built-in camera, computer,

and internet connection, the bird feeder comprising.” Nor would it have been obvious to modify Kin’s pet feeder to be the claimed bird feeder. *See, supra*, § II.B.

Additionally, claim 1 recites “the bird feeder comprising ... the camera internally mounted to the bird feeder such that the camera is aligned with the feed port to observe feeding birds”. There is no disclosure in Kin of feeding birds, thus Kin does not satisfy any of these claim elements requiring a feed port to observe feeding birds. Even if birds are assumed, Petitioner has not met their burden of establishing that Kin discloses the camera 321 captures birds accessing either the ports 351, 352 in the base, especially here due to the distance depicted between the feed port 351, 352, and the positioning of the camera 321 in Petitioner’s annotated Figure 2 of Kin (reproduced below). Pet. 99. Nor has Petitioner established Kin would have been modified as such.

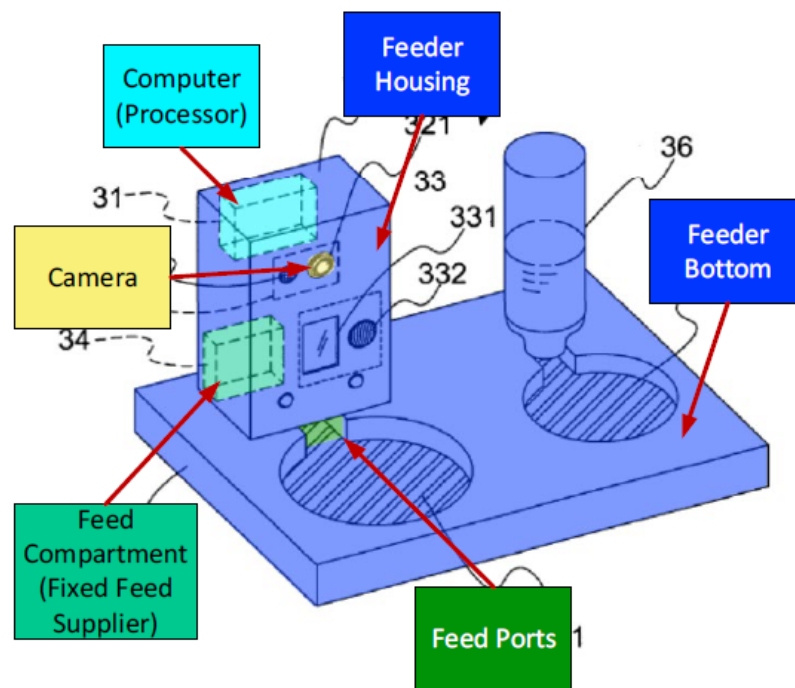


FIG.2

**4. Kin does not teach “the bird feeder comprising ... an internal power source” (claim 1(g)).**

As acknowledged by Petitioner, “Kin does not explicitly disclose a power source”. Pet. 106. Without citation, Petitioner nevertheless insists that “it is implicit that the feeder would include an internal power source.” *Id.* However, as the nature of the Kin pet feeder does not appear to be practicable with an internal power source, such as the batteries suggested by Petitioner (*id.*), that is necessarily limited in capacity. The “remote interactive feeder” (EX1007 ¶12) more likely requires continuous ongoing power to ensure “the pet raiser is aware of the status of the pet and feeds the pet at a desired time even at a remote place.” EX1007, ¶17. All of

these characteristics of Kin more likely suggest that the supply of power from an external, unlimited power supply, such as household electric, rather than to rely on batteries that would deplete and could expire while the owner is away, which would undermine the stated purpose in Kin of remotely interacting with and feeding the pet *at a specific time*. EX1007 ¶¶2, 4, 17, 18. The depletion of an internal power source would also leave the owner unable to release a ration of pet food until the pet owner returns home and direct intervention is possible. There is no indication that the power for Kin's device would be provided from onboard battery or other internal power source.

Petitioner then proceeds to assert that it would be obvious to position a power source internally (*Id.* 107); it is confusing whether Petitioner is asserting that an internal power source is inherent in the disclosure of Kin, or whether positioning a power source internally is not inherent, but would have been obvious.

Moreover, Petitioner asserts it would be "...obvious to POSITA to place the power source (such as a battery) internally to protect the it [sic] from external forces. Pet. 107. Petitioner has not established that there are external forces that would require Kin's pet feeder to have an internal power source protected from an external force. Clark points to the use of a battery, as being "resilient against power outages" (EX1001 ¶176). This fails to establish a need for any battery provided to be

positioned internal, and an external backup battery or emergency power supply could readily be provided to power Kin's feeder in the event of a power outage, without being internally positioned. Merely asserting that there are external forces, as raised in the Petition, does not identify what those forces are to motivate one to position the power supply internally, particularly, in view of the previous argument that a continuous power supply would more likely be appropriate, rather than risk the battery dying while pet raiser is away, and result in the pet not being fed timely.

**F. Grounds 3A (Kin in view of Rofougaran), 3B (Kin in view of Bennett), and 3C (Kin in view of Bevan, Raspberry Pi 2 Model B) Do Not Render Obvious Claims 2-6**

Because Petitioner has failed to show that Kin renders independent claim 1 obvious, Petitioner necessarily fails to show that dependent claims 2-6 are obvious, in view of the teachings of Kin, when modified in view of Rofougaran cited for a WiFi dongle (EX1009), Bennett cited as providing a separator barrier between the feed and electronics (EX1005), Bevan cited as providing a Raspberry Pi Controlled Camera Shutter Release (EX1010 5), or the specifications of the Raspberry Pi 2 Model B (EX1010 12) as raised in the Petition. Pet. 108-117. The citations to Rofougaran, Bennett, Bevan, and Raspberry Pi 2 Model B in a permissible combination with Kin, are unable to provide that which was identified as lacking in Kin.

Because Petitioner has failed to show that Kin renders obvious independent claim 1, Petitioner necessarily fails to show that dependent claims 2–6 are obvious.

In Ground 3A, Petitioner’s reliance on Rofougaran for a WiFi dongle (EX1009) to argue that this combination teaches the limitations of claim 2, Pet. 108–110, does not cure the deficiencies of Kin alone. *See, supra*, § V.E.1-4.

Similarly, in Ground 3B, Petitioner relies on Bennett (EX1005) as providing a separator barrier between the feed and electronics of Kin, Pet. 112, combined with Kin’s vertical design, which allows gravity to facilitate the flow of water and feed, Pet. 111–112, to argue that this combination discloses the limitations of claim 3. But the combination does not cure the deficiencies of Kin alone. *See, supra*, § V.E.1-4.

Last, for Ground 3C, Petitioner relies on Bevan for a Raspberry Pi Controlled Camera Shutter Release (EX1010 5), and the Raspberry Pi Model B specification (EX1010 12) to disclose (1) “a processor; a display connector; a multi-media interface; an audio/video jack; and an ethernet socket,” as claimed by claim 4; (2) a “a micro-USB socket and a USB port,” as claimed by claim 5; and (3) an “HDMI port” and claimed by claim 6. Pet. 113–117. This combination does not cure the deficiencies of Kin alone. *See, supra*, § V.E.1-4.

Petitioner ***does not*** rely on Rofougaran, Bennett, Bevan, and Raspberry Pi 2 Model B to remedy the shortcomings revealed by Kin; instead, Petitioner relies on

these references to disclose limitations in claims *depending* from claim 1—here, claims 2–6. Petitioner’s references do not disclose or supply the claim 1 elements identified above that are missing from Kin to render obvious claim 1 of the ’242 Patent and teach the claimed invention. Accordingly, Grounds 3A–3C fail for the same reason as Ground 3.

## **VI. CONCLUSION**

For the foregoing reasons, Patent Owner respectfully requests that the Board deny all grounds of challenge, dismiss the Petition, and decline institution.

Dated: March 2, 2026

Respectfully submitted,

/s/ Kevin C. Myhre

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*Back-Up Counsel for Patent Owner*

**CERTIFICATE OF COMPLIANCE**

Pursuant to 37 C.F.R. § 42.24(d), the undersigned certifies that this Preliminary Response complies with the type-volume limitation of 37 C.F.R. § 42.24(b). The word count application of the word processing program used to prepare this Preliminary Response indicates that the Preliminary Response contains 13,927 words.

Dated: March 2, 2026

Respectfully submitted,

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U.S. Patent No. 11,627,242

**CERTIFICATE OF SERVICE**

The undersigned certifies that on March 2, 2026, a true and correct copy of the foregoing was served on Counsel for Petitioner via filing through the P-TACTS System, as well as by delivering a copy via electronic mail to the following:

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