

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TELEBRANDS CORP.,
Petitioner,

v.

TINNUS ENTERPRISES, LLC,
Patent Owner.

Case PGR2016-00031
Patent 9,315,282 B2

Before MICHAEL W. KIM, FRANCES L. IPPOLITO, and
KEVIN W. CHERRY, *Administrative Patent Judges*.

IPPOLITO, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 328(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

Telebrands Corp. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) for post-grant review of claims 1, 2, and 3 of U.S. Patent No. 9,315,282 B2 (Ex. 1001, “the ’282 patent”). Pursuant to 35 U.S.C. § 324, we determined that Petitioner showed that the information presented in the Petition, if such information was not rebutted, would demonstrate that it is more likely than not that claims 1, 2, and 3 of the ’282 patent were unpatentable. Paper 15 (“Inst. Dec.”). Tinnus Enterprises, LLC (“Patent Owner”) filed a Patent Owner Response (Paper 40, “PO Resp.”). Petitioner filed a Reply. Paper 60 (“Reply”).

Patent Owner filed Observations on Cross Examination. Paper 65 (“Obs.”). Petitioner filed a Response to Patent Owner’s Observations on Cross Examination. Paper 70 (“Response Obs.”). We have considered fully both the Observations and Response to Observations in reaching this Final Written Decision.

Petitioner also filed a Motion to Exclude certain evidence. Paper 66 (“Mot. Exclude”). Patent Owner filed an Opposition to the Motion to Exclude. Paper 71 (“Opp.”). Petitioner also filed a Reply in Support of its Motion to Exclude. Paper 75 (“Mot. Reply”). An oral hearing was held on December 1, 2017. Paper 86 (“Tr.”).

We issue this Final Written Decision pursuant to 35 U.S.C. § 328(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine Petitioner has not proven by a preponderance of the evidence that claims 1, 2, and 3 of the ’282 patent are unpatentable. *See* 35 U.S.C. § 326(e). Petitioner’s Motion to Exclude is granted-in-part.

A. Related Proceedings

We are informed that Petitioner is named as a defendant in a number of federal district court cases involving the '282 patent—*Tinnus Enters., LLC v. Telebrands Corp.*, Civil Action No. 6:16-cv-00033-RWS-JDL (E.D. Tex.); *Tinnus Enters., LLC v. Wal-Mart Stores, Inc.*, No. 6:16-cv-00034-RWS-JDL (E.D. Tex.); *Tinnus Enters., LLC v. Wal-Mart Stores, Inc. d/b/a Wal-Mart et al.*, No. 6:17-cv-00361 (E.D. Tex.); *Tinnus Enters., LLC et al. v. Telebrands Corp.*, No. 6:17-cv-00170 (E.D. Tex.). Paper 83, 2–3. We understand that a jury returned a verdict finding Petitioner infringed the '282 Patent, that the patent was not invalid for obviousness, and awarded damages of \$12.3 million. Paper 86, 4. There were also a number of related appeals recently decided by the U.S. Court of Appeals for the Federal Circuit related to the district court's grant of a preliminary injunction in these cases where the Federal Circuit has summarily affirmed the preliminary injunctions. *See Tinnus Enters., LLC v. Telebrands Corp.*, Nos. 2017-1175, 2017-1760, 2017-1811, slip op. 2 (Fed. Cir. Jan. 16, 2018) (non-precedential); *Tinnus Enters., LLC v. Telebrands Corp.*, No. 2017-2194, slip op. 2 (Fed. Cir. Jan. 16, 2018) (non-precedential).

In addition, a related patent, U.S. Patent No. 9,051,066 B1 ("the '066 Patent"), is at issue in *Tinnus Enters., LLC v. Telebrands Corp.*, Civil Action No. 6:15-cv-00551-RWS-JDL (E.D. Tex.) and *Tinnus Enters., LLC, et al. v. Telebrands Corp.*, Civil Action No. 6:17-cv-00199-RWS-JDL. Paper 83, 3–4. This case includes an appeal to the Federal Circuit of the district court's preliminary injunction decision. *Id.*; *Tinnus Enters., LLC v. Telebrands Corp.*, 846 F.3d 1190 (Fed. Cir. 2017).

The '066 Patent was the subject of a post-grant review before the Board—*Telebrands Corp. v. Tinnus Enters., LLC*, Case PGR2015-00018 (“the -00018 PGR”). The Board instituted trial in the -00018 PGR on January 4, 2016. *See Telebrands Corp. v. Tinnus Enters., LLC*, Case PGR2015-00018 (PTAB Jan. 4, 2016) (Paper 7) (“-00018 PGR DI.”). A final written decision in PGR2015-00018 issued on December 30, 2016 finding claims 1–6, 8, and 10–14 of the '066 Patent unpatentable for indefiniteness under 35 U.S.C. § 112(b). *See Telebrands Corp. v. Tinnus Enters. LLC*, Case PGR2015-00018 (PTAB Dec. 30, 2016) (Paper 75) (“-00018 PGR FD”). The -00018 PGR FD is the subject of an appeal to the Federal Circuit styled as *Tinnus Enters., LLC v. Telebrands Corp.*, No. 2017-1726 (Fed. Cir.). Paper 83, 3.

Related patent U.S. Patent No. 9,242,749 B2 is the subject of a post-grant review petition in PGR2016-00030 involving the same parties.

There are a number of other petitions for post-grant review on patents related to the '282 patent, and there are also several applications related to the '282 patent currently pending. *See* Paper 32, 1–2.

B. The '282 Patent

The '282 patent, titled “System and Method for Filling Containers with Fluids,” issued April 19, 2016, from U.S. Application No. 14/921,212 (“the '212 application”), filed October 23, 2015. Ex. 1001, at [54], [10], [21], [22]. The '212 application is a continuation of U.S. Application No. 14/723,953 (“the '953 application”), filed in May 2015, which issued as the '749 patent. *Id.* at [63]. The '953 application is a continuation of U.S. Application No. 14/492,487, filed on Sept. 22, 2014, which issued as the '066 Patent. *Id.* at [63]. The '282 patent further claims the benefit of U.S.

Provisional Application No. 61/942,193 filed on February 20, 2014 and U.S. Provisional Application No. 61/937,083 filed on February 7, 2014. *Id.* at [60].¹

The '282 patent is directed generally to systems and methods for filling containers with fluids. Ex. 1001, [54]. Figure 1 of the '282 Patent is reproduced below.

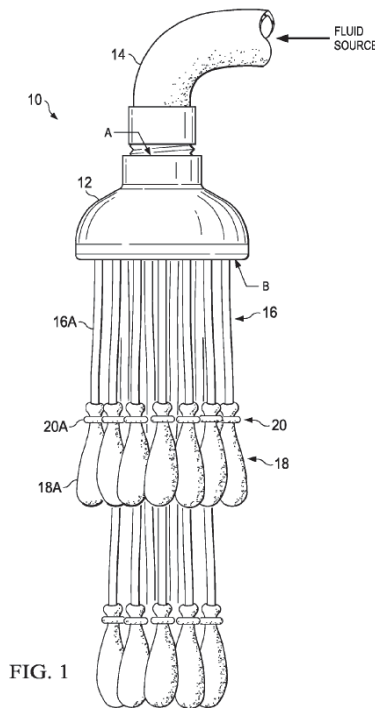


FIG. 1

Figure 1 is a simplified diagram illustrating an example embodiment of system 10 for filling containers with fluids. *Id.* at 2:36–37. As shown in Figure 1, system 10 includes housing 12 removably attached to hose 14 at

¹ Because the earliest possible effective filing date for the '282 patent is after March 16, 2013 (the effective date for the first inventor to file provisions of the America Invents Act) and this petition was filed within 9 months of its issue date, the '282 patent is eligible for post-grant review. *See* 35 U.S.C. § 321(c).

end A and to a plurality of hollow tubes 16 at end B. *Id.* at 2:38–40. A plurality of containers 18, such as water balloons, may be clamped to plurality of tubes 16 using elastic valves 20, which may comprise elastic fasteners such as O-rings. *Id.* at 1:34–35, 2:54–62, 3:8–10. In one embodiment, housing 12 or tubes 16 may be shaken to detach filled containers 18 from tubes 16. *Id.* at 3:55–60. Elastic valves 20 or fasteners may constrict the necks of containers 18, sealing them, when the containers slide off tubes 16. *Id.* at 4:6–9.

C. Illustrative Claim

Claim 1, which is the sole independent claim, is illustrative of the claimed subject matter, and is reproduced below:

1. An apparatus comprising:
 - a housing comprising an inlet and a plurality of outlets;
 - a plurality of hollow tubes, each hollow tube attached to the housing at a respective one of the outlets;
 - a plurality of containers, each container removably attached to a respective one of the hollow tubes; and
 - a plurality of elastic fasteners, each elastic fastener clamping a respective one of the plurality of containers to a respective tube, and each elastic fastener configured to restrict detachment of its respective container from its respective tube and to automatically seal its respective container upon detachment of the container from its respective tube, the restriction of each elastic fastener being sufficiently limited to permit its respective container to detach from its respective tube upon one or more of (1) at least partially filling the container with fluid and (2) shaking the housing;

wherein the apparatus is configured to fill the containers substantially simultaneously with fluid; and

wherein at least first and second ones of the plurality of containers are disposed sufficiently close to each other such that they press against each other, regardless whether the first and second ones of the plurality of containers are in a filled state or an unfilled state.

Id. at 6:35–58.

D. The Asserted References and Testimonial Evidence

Petitioner relies upon the following references (Pet. 13–14):

Reference	Patent or Pub. No. or Description	Date	Exhibit No.
Cooper	US 5,826,803	Oct. 27, 1998	Ex. 1009
Saggio	US 2013/0118640 A1	May 16, 2013	Ex. 1010
Donaldson	US 5,014,757	May 14, 1991	Ex. 1012

Petitioner also relies on the Declaration of Dr. Ken Kamrin (Ex. 1020); the Declaration of Scott Steinberg (Ex. 1066); and the deposition testimony of a number of witnesses.

Patent Owner has submitted the First and Second Declarations of Barry M. Kudrowitz (Ex. 2013; Ex. 2023); the First and Second Declarations of Anna Mowbray (Ex. 2014; Ex. 2024); the Declaration of James Nunziati (Ex. 2015); the Declaration of Chris Byrne (Ex. 2025); the Declaration of Josh Malone (Ex. 2026); and the trial and deposition testimony of a number of witnesses.

E. The Instituted Grounds

We instituted post-grant review of claims 1, 2, and 3 of the '282 patent on the following grounds (Inst. Dec. 38–39):

References	Basis	Claims Challenged
	§ 112(b) for indefiniteness	1–3
Cooper, Saggio, and Donaldson	§ 103(a)	1–3

II. ANALYSIS

A. Level of Skill in the Art

Petitioner asserts that a person of ordinary skill in the art (“POSA”) at the time of the effective filing date of the '282 patent was a person having general knowledge about, and experience with, expandable containers, including, without limitation, balloons, and at least an associate’s degree in a technical science or engineering. Pet. 14 (citing Ex. 1020 ¶¶ 10–14).

Patent Owner preliminarily responded that a POSA would have a four year Bachelor’s Degree in Mechanical Engineering or a similar field or equivalent industrial experience in designing expandable containers and devices to fill such containers. Prelim. Resp. 9 (citing Ex. 2013 ¶¶ 8–9).

For the purposes of our Institution Decision, we agreed with Petitioner that a POSA would have been a person having general knowledge about, and experience with, expandable containers, including, without limitation, balloons, and at least an associate’s degree in a technical science or engineering. Inst. Dec. 7–8. We explained that this level of skill is consistent with the types of problems and solutions described in the '282 patent and cited prior art. *Id.* at 8. For example, the '282 patent describes a

fluid inflatable system that uses elastic valve 20A (e.g., mechanical gasket, O-ring, etc.) for sealing fluid inside multiple containers (e.g., water balloons). *See* Ex. 1001, 1:22–24, 3:8–14.

After institution, Patent Owner first argues that the education level of “at least an associate’s degree in mechanical engineering” has no upper limit and “encompasses someone with a Ph.D. or even a genius.” PO Resp. 6.² Second, Patent Owner disagrees with our requirement that a POSA have “a general knowledge about and experience with expandable containers.” *Id.* Instead, Patent Owner maintains that a POSA would instead have “actual experience designing expandable containers and devices to fill such containers.” *Id.*

With respect to the first argument, we do agree that, in the interests of clarity, we should omit “at least” from our definition. As for Patent Owner’s contention that “actual experience designing expandable containers and devices to fill such containers” is required, we disagree. As demonstrated by the prior art of record, the concepts and principles underlying balloons is well-known and straight-forward. *See* Ex. 1020 ¶¶ 12–14. We do not agree

² Patent Owner also continues to maintain that “the appropriate level of education is a 4-year Bachelor’s Degree in Mechanical Engineering or a similar field. (Ex. 2013 at ¶¶ 8–9.)” PO Resp. 6. In support, Patent Owner cites Dr. Kudrowitz, who asserts that “[d]eveloping an invention of this nature would not come easily to the students who are not in the mechanical engineering degree program This invention involves an understanding of fluids, forces, and mechanical design.” Ex. 2013 ¶ 9. On this latter assertion, the parties and the Board are in agreement that a degree in mechanical engineering is required. Neither Patent Owner nor Dr. Kudrowitz, however, explain why an associate’s degree in this field is inadequate, and our review of the prior art leads us to agree with Petitioner that no education beyond an associate’s degree should be required.

that specialized knowledge or experience is required. Thus, our modified definition of a POSA is “a person having a general knowledge about and experience with expandable containers, including, without limitation balloons, and an associate’s degree in mechanical engineering, or the equivalent.”

In any event, none of the issues in this case turn on the definition of a POSA, and the prior art of record provides ample evidence of the level of skill in the art. *See In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (finding that the Board of Patent Appeals and Interferences did not err in concluding that the level of ordinary skill was best determined by the references of record); *see also Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (“[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error ‘where the prior art itself reflects an appropriate level and a need for testimony is not shown.’”).

B. Claim Construction

As a first step in our analysis, we determine the meaning of the claims. In a post-grant review, the Board gives claim terms in an unexpired patent their broadest reasonable interpretation in light of the specification of the patent in which they appear. 37 C.F.R. § 42.200(b). Under the broadest reasonable interpretation standard, and absent any special definition, claim terms are given their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definition for a claim term must be set forth with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). “Under a broadest reasonable interpretation,

words of the claim must be given their plain meaning, unless such meaning is inconsistent with the specification and prosecution history.” *Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1062 (Fed. Cir. 2016).

2. *Terms Construed in the Institution Decision*

We construed several terms in our Decision on Institution, which are set forth in the following table. Inst. Dec. 8–11.

Claim Term	Construction in Institution Decision
elastic fastener	“an elastic element for attaching things together”
at least partially filling	“adding an amount of fluid”
shaking	“applying an acceleration”
each elastic fastener being sufficiently limited to permit its respective container to detach from its respective tube upon one or more of (1) at least partially filling the container with fluid and (2) shaking the housing	“the restriction of each elastic fastener is such that the container detaches upon adding an amount of fluid to the container, applying acceleration to the housing, or both”

Neither party disputes the language of these constructions. *See generally* PO Resp. 6–7; Reply. We are constrained to adopt them for this Final Written Decision. *See Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1080 (Fed. Cir. 2015) (*quoting Rodale Press, Inc. v. FTC*, 407 F.2d 1252, 1256–57 (D.C. Cir. 1968)) (“‘an agency may not change theories in midstream without giving respondents reasonable notice of the change’ and ‘the opportunity to present argument under the new theory.’”)

Having said that, while not expressly disputing the above construction, the parties do appear to disagree concerning the proper scope

of the term “upon” recited in the “sufficiently limited” clause of the challenged claims. Reply 4–5 (“‘Upon’ refers to the timing of when detachment occurs –its broadest reasonable interpretation is ‘after.’”); *see* Tr. 11: 9–12:9, 44:9–45:17, 46:19–47:11. Petitioner asserts that “upon” means “after,” and Patent Owner takes the position that “upon” indicates detachment occurs after a required condition occurs. *See* Tr. 47:1–11. Having reviewed the relevant arguments and evidence, we do not view these two proposed constructions to be meaningfully distinct. Both parties essentially agree that detachment happens after “one or more of (1) at least partially filling the container with fluid and (2) shaking the housing.” Reply 5–6; *see* Tr. 74:16–21 (“It’s always been our position that upon refers to a point, and time in the point is after.”), *id.* at 46:19–47:12. This interpretation is also consistent with the express claim language quoted above. Thus, we construe “upon” to mean “after.”

Other claim terms

None of our other determinations require us to interpret expressly any other claim term. *See Netword, LLC v. Centraal Corp.*, 242 F.3d 1347, 1355–56 (Fed. Cir. 2001) (even without an express construction of claim term, Board findings establishing the scope of the patented subject matter may fall within the ambit of claim construction).

C. Challenge under 35 U.S.C. § 112(b) for Indefiniteness

1. Legal Standard

In reviewing the indefiniteness of a claim, we consider whether the claim language is “cast in clear—as opposed to ambiguous, vague, indefinite—terms.” *In re Packard*, 751 F.3d 1307, 1313 (Fed. Cir. 2014); *see* MANUAL OF PATENT EXAMINING PROCEDURE (“MPEP”) § 2173.02(II)

(Rev. 07.2015, Nov. 2015) (advising Examiners that the indefiniteness standard is whether “the language of the claim is such that a person of ordinary skill in the art could not interpret the metes and bounds of the claim so as to understand how to avoid infringement” (citation omitted)). Exact precision is not required. The test for determining the question of indefiniteness may be formulated as whether the claims “set out and circumscribe a particular area with a reasonable degree of precision and particularity.” *In re Moore*, 439 F.2d 1232, 1235 (CCPA 1971). With regard to the reasonableness standard, one must consider the language in the context of the circumstances. *In re Packard*, 751 F.3d at 1313.

2. “*regardless whether the first and second ones of the plurality of containers are in a filled state or an unfilled state.*”

Based on the preliminary record, and for the purposes of the Institution Decision only, we instituted post-grant review on Petitioner’s challenge that the term “filled state” in claim 1 is indefinite under 35 U.S.C. § 112(b), because the term is “dependent upon the subjective desires of the user purportedly practicing claim 1.” Inst. Dec. 20–22; *see* Pet. 27–28 (citing Ex. 1020 ¶¶ 62–64).

In its Patent Owner Response, Patent Owner counters that our treatment of “filled state” improperly isolated the claim term from the rest of the claim phrase. PO Resp. 82. Patent Owner asserts that “taking the plain language of the claim, it is understood that the containers are pressed against each other when any amount of fluid is in the containers.” *Id.* at 84. According to Patent Owner, “there simply is no need whatsoever to pin down a precise meaning of the term ‘filled’ in the context of claim 1.” *Id.*

Petitioner responds that “without an objective definition of ‘filled state,’ a POSA cannot . . . understand the scope of the ’282 patent, because in one instance the containers may be pressing in a subjectively ‘filled state’ but in another instance the same containers may not be pressing in another subjectively ‘filled state.’” Reply 24. Petitioner adds that Patent Owner’s expert, Dr. Kudrowitz, did not address indefiniteness in his Second Declaration. *Id.* (citing Ex. 2023).

While the terms “unfilled state” and “filled state” describe the fullness for a container, we do not agree with Petitioner that the claim language requires determining the precise amount of fluid for each state. In particular, the entire claim phrase, “regardless whether the first and second ones of the plurality of containers are in a filled state or an unfilled state,” expressly indicates that determining the exact precise amount of fluid in the balloons is unnecessary because *regardless* of whether the balloons are in either state, the “at least first and second ones of the plurality of containers are disposed sufficiently close to each other such that they press against each other.” In other words, the exact precise volume of fluid or water needed to reach a “filled state” does not need to be determined in order to understand the metes and bounds of the claim so as to understand how to avoid infringement.³

Further, even considering Petitioner’s argument that “as containers are filled with a fluid, the weight of the fluid may cause the tubes upon which the containers are attached to bend away from one another,” we are not

³ We note that Dr. Kudrowitz addressed Petitioner’s indefiniteness challenge in his first Declaration at paragraph 26 of Exhibit 2013, which we rely on, in part, for this analysis.

persuaded that the exact measurement of fullness is required in light of the entire claim phrase. *See* Reply 24. In Petitioner’s proposed scenario, the containers move away from each other when they are filled with water, and, thus, would not be pressing against each other *regardless* of whether filled or not filled, as required by the claim. Thus, we determine that the scope of this claim language is adequately clear and does not require, as Petitioner proposes, determining a precise subjective amount of fluid to be added to the containers.

Based on the complete record, including all the arguments and evidence presented, we determine that Petitioner has not demonstrated by a preponderance of the evidence that claims 1–3 of the ’282 patent are indefinite.

D. Claims 1–3 — Obvious over Cooper, Saggio, and Donaldson

1. Legal Standard

A claim is unpatentable for obviousness “if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.” 35 U.S.C. § 103. The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art⁴; and

⁴ The level of skill in the art is discussed in Section IIA.

(4) objective evidence of nonobviousness, i.e., secondary considerations, when in evidence. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

2. Scope and Content of the Prior Art

a. Cooper (Ex. 1009)

Cooper discloses a lawn and garden sprinkler that may be attached by female connector nut 16 to a garden hose. Ex. 1009, 2:20–26, Fig. 1. The sprinkler includes manifold 11, which is supplied water through inlet 15, and multiple flexible tube assemblies 18. *Id.* at 2:22–34. Figure 4 of Cooper is reproduced below.

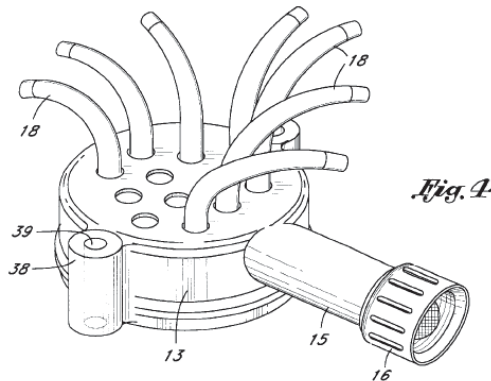


Figure 4 is a perspective view of Cooper's sprinkler. *Id.* at 2:8–9, 3:20–22. As shown in Figure 4, the “tubes may be bent . . . by the user into any desired curve.” *Id.* at 3:20–22.

b. Saggio (Ex. 1010)

Saggio discloses a system for filling a plurality of tie-less water balloons. Ex. 1010 ¶ 7. Saggio also discloses a tie-less water balloon including “a one-way valve . . . inside the balloon that allows water to enter the balloon but not escape it.” *Id.* Figures 5 and 7 of Saggio are reproduced below:

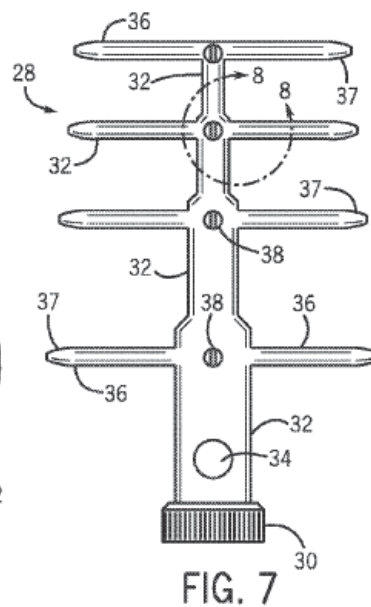
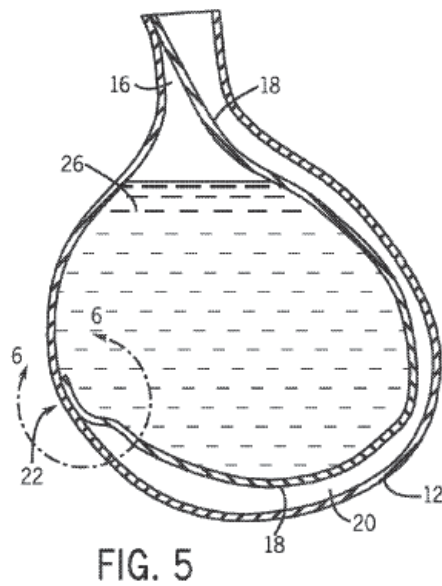


Figure 5 is a cross-sectional view showing Saggio's tie-less water balloon filled with water. *Id.* ¶ 13. Figure 7 is a front elevation view of a multi-balloon filling assembly. *Id.* ¶ 15.

As shown in Figure 7, the multi-balloon filling assembly includes water supply fitting 30, main conduit 32, lateral conduits 36, and plurality of conduit tips 37. *Id.* ¶ 22. Water supply fitting 30 is adapted to connect to a hose. *Id.* ¶ 23. Conduit tips 37 are adapted to engage the necks of the balloons, such that a large number of balloons may be filled simultaneously. *Id.* ¶ 24.

As shown in Figure 5, the tie-less water balloon is filled with water 26 through one-way channel 20 formed by outer wall 12 and inner membrane 18. *Id.* ¶ 19. After filling, the water inside the balloon presses the distal end of inner membrane 18 against outer wall 12 to close channel 20 and to prevent the water from escaping. *Id.* ¶¶ 7, 19. As such, inner membrane 18 functions as a one-way valve.

c. Donaldson (Ex. 1012)

Donaldson is directed to a balloon inflating device that includes a pressurized gas source for inflation of the balloon. Ex. 1012, Abstract. Figures 1, 4, and 5 of Donaldson are reproduced below:

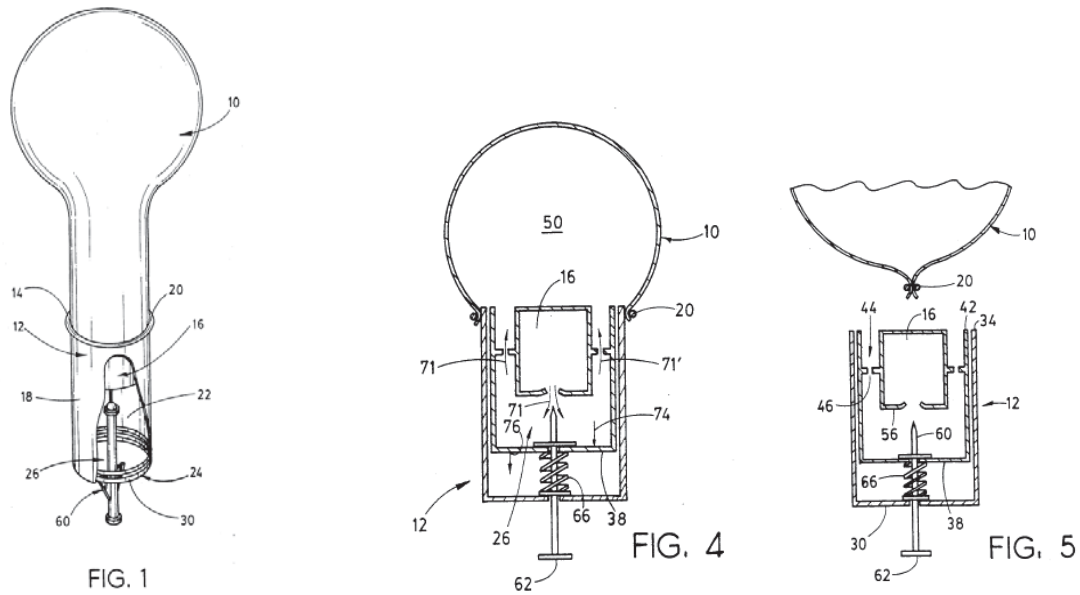


Figure 1 shows balloon 10 partially inflated by inflation device 12 that is attached to mouth 14 of balloon 10. *Id.* at 2:34–41. Pressurized gas container 16 is attached to mouth 14 to allow pressurized gas to enter balloon 10. *Id.* A sealing device, such as O-ring 20, attaches mouth 14 to outer surface 18 of the device. *Id.* In operation, device 12 works by impacting it against a hard surface to release the fluid in pressurized gas container 16. *Id.* at 2:42–44. As shown in Figure 4, the impact may fire pin head 62 against inwardly toward pressurized container 16, which ruptures and releases pressurized gas that fills inner container 24 and moves through orifices 46 into balloon 10. *Id.* at 4:33–50. When balloon 10 is inflated to a prescribed pressure, the further escape of pressurized gas from container 16 will apply force to the inner container bottom shown by arrow 74. *Id.* at

4:53–56. The downward pressure moves inner container 16 toward outer container wall upper edge 34, which causes the surface on which O-ring 20 is seated to disappear. *Id.* at 4:65–5:3. As shown in Figure 5, this releases the O-ring and pulls the balloon off the device. *Id.* at 5:3–6.

3. Differences between the Claimed Subject Matter and the Prior Art

Petitioner argues that claims 1–3 of the '282 patent would have been obvious over the combination of Cooper, Saggio, and Donaldson. *See* Pet. 14, 47–54. Below we discuss independent claim 1, which is also illustrative of the subject matter of dependent claims 2 and 3.

a. Petitioner's Contentions

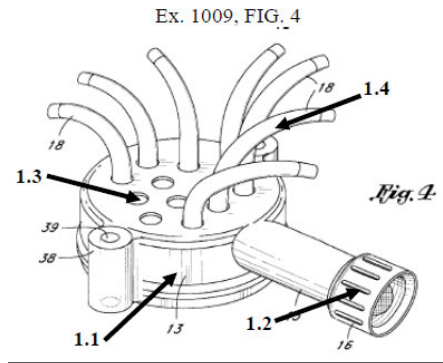
Turning to independent claim 1, we discern that the claimed subject matter is directed generally to an apparatus comprising a housing with an inlet and a plurality of outlets, a plurality of hollow tubes, a plurality of containers, at least first and second ones of the plurality of containers sufficiently close to each other such that they press against each other, and

a plurality of elastic fasteners, each elastic fastener clamping a respective one of the plurality of containers to a respective tube, and each elastic fastener configured to restrict detachment of its respective container from its respective tube and to automatically seal its respective container upon detachment of the container from its respective tube, the ***restriction of each elastic fastener being sufficiently limited to permit its respective container to detach from its respective tube upon one or more of (1) at least partially filling the container with fluid and (2) shaking the housing.***

(emphasis added). Claim 1 further requires that the recited apparatus “is configured to fill the containers substantially simultaneously with fluid.”

For most of these limitations, Petitioner relies on Saggio and Cooper. Petitioner provides, for example, an annotated version of Cooper's Figure 4

(reproduced below) allegedly showing elements in Cooper that teach housing 1.1, inlet 1.2, outlets 1.3, and plurality of hollow tubes 1.4. Pet. 37.



Pet. 37 (Claim Chart); *see id.* at 39. Petitioner further asserts that Saggio discloses a plurality of balloons (i.e., containers) that are removably attached to a respective one of the hollow tubes for simultaneously filling the containers with water. Pet. 40 (citing Ex. 1009, FIG. 1, element 10, ¶ 24). Petitioner argues it would have been obvious to removably attach Saggio’s balloons to Cooper’s tubes, because “[i]n designing an apparatus that can fill multiple water balloons at one time, one skilled in the art prior to the effective filing date of the ’282 Patent would have thought to place water balloons at the end of a hose attachment apparatus that has multiple hollow tubes and dispenses water.” *Id.* at 41 (citing Ex. 1020 ¶ 99). Petitioner adds that one of ordinary skill in the art would have understood that the tubes in Cooper may be posed so that the plurality of containers are disposed sufficiently close to each other such that they press against each other,” regardless of the plurality of containers being in a subjective filled state or an unfilled state. Pet. 46–47 (citing Ex. 1020 ¶¶ 67–69, 114–116).

Further, in the Petition, Petitioner presents three different theories for how Donaldson teaches or suggests the recited elastic fastener. First, Petitioner argues that Donaldson teaches an elastic fastener that permits

detachment upon “at least partially filling the balloon with a fluid” (claim 1) because Donaldson’s O-ring allows balloon 10 to detach from tube 12 “when the balloon is at least partially filled with a pressurized gas, i.e., a fluid, due, at least in part, to the force resulting from a pressure differential, which causes the tube 12 to move downward with respect to balloon 10 and for the O-ring to slide off of the tube.” Pet. 51 (citing Ex. 1020 ¶¶ 83, 130; Ex. 1012, 4:53–5:10).

Second, Petitioner asserts that Donaldson’s O-ring is inherently capable of performing the claimed function of permitting the containers to detach after partially filling and/or shaking. Specifically, Petitioner asserts that Donaldson teaches that the O-ring slides off, after the balloon is expanded by at least partially filling it with air and the tube is withdrawn, and that the forces at play in Donaldson are equivalent to the one-time or repeated force that can be applied by shaking. Pet. 52 (citing Ex. 1020 ¶ 131).

Third, Petitioner, argues, alternatively, that “one of ordinary skill in the art would have known that any O-ring used to attach Saggio’s balloons to Cooper’s tubes should be (and could be) designed to be of such a strength to perform those functions—and doing so would have been a rudimentary task.” Pet. 52 (citing Ex. 1020 ¶ 132; Ex. 1012, 1:47–49, 4:53–5:10); *see also* Reply 9 (“the ’282 patent does not provide a numerical value for any variable and further does not describe how to specifically engineer the claimed elastic fastener (Ex.1029, 74:6–17; 77:17–79:10)—demonstrating that the patentee believed it was within the skills of a POSA to design such a fastener.”).

In its Reply, Petitioner further asserts two theories for how Donaldson operates: “(1) the fluid, which is a pressurized gas, causes mechanical actuation of tubes, which aids in detachment of the balloon and O-ring; and (2) the pressurized gas creates a pressure differential on the balloon’s membrane, forcing the balloon and O-ring off of the tube.” Reply 6.

Further, Petitioner argues that it would have been obvious to substitute the O-ring disclosed in Donaldson “in place of Saggio’s self-sealing internal elastic membrane,” because a POSA would have recognized that O-rings are a simpler and cheaper way to accomplish the same self-sealing task taught in Saggio. Pet. 49; Ex. 1020 ¶ 123. Additionally, Petitioner asserts that with the proposed combination, Donaldson teaches a way to detachably hold balloons on a large number of tubes, without having to use several sets of hands to hold them on Cooper’s hollow tubes. Pet. 49–50 (citing Ex. 1010 ¶ 4; Ex. 1012, 1:18–49).

In its Reply, Petitioner adds that Patent Owner’s expert, Dr. Kudrowitz, “admitted that selecting an elastic ring that: clamps a balloon on a tube, holds the balloon on the tube until the balloon is at least partially filled with a fluid, allows the balloon to detach from the tube, and automatically seals a balloon upon detachment, as Donaldson teaches, was within the skill of a POSA.” Reply 3–4 (citing Ex.1029, 70:22–72:12; Ex.1039, 290:14–294:16). Petitioner also contends that Donaldson’s mechanical actuation is not the only mechanism that permits the balloon to detach. *Id.* at 4. Rather, Petitioner argues that Dr. Kudrowitz agrees Donaldson teaches that “[o]nce the balloon reaches a pre-determined pressure, the pressurized gas causes the inner tube to move relative to the outer tube, which thereby causes the O-ring and balloon to detach from the

apparatus.” *Id.* at 7 (citing Ex.1029, 64:8–65:7; 75:24–76:24). Petitioner additionally argues that “a POSA would understand that Donaldson’s figures teach a balloon detaching due to pressure differential,” because “‘gas inside the balloon membrane is pushing outward more than the air pressure from the outside pushes inward’ on the balloon.” *Id.* at 7 (citing Ex. 2065, 173:16–181:17; Ex.1029, 75:24–76:24).

With regard to inherency, Petitioner further asserts that a POSA would understand that Donaldson’s O-ring allows the balloon to detach with a force in the form of pressure differential, because Donaldson teaches that the tensile force in the balloon’s membrane is greater than the force exerted by the O-ring, holding the balloon on the tube. Reply 8 (citing Ex. 1020 ¶ 132; Ex. 2065, 174:8–181:17; Ex. 1064). Petitioner contends “[t]his means that the force exerted by the O-ring can always be overcome by a force exerted on the balloon’s membrane, causing the balloon to detach from the tube before the balloon pops or tears.” *Id.* at 8.

b. Patent Owner’s Contentions

In its Patent Owner Response, Patent Owner does not dispute the teachings of Saggio and Cooper, but directs its arguments to the “elastic fastener” limitation of claim 1. Among these arguments, Patent Owner highlights the differences between Saggio and Donaldson, including that: (1) Saggio does not include an elastic fastener; (2) Saggio does not disclose that the containers detach upon being at least partially filled; and (3) Donaldson teaches a series of mechanical steps (e.g., mechanical actuation) must be performed before an air-filled balloon is detached and sealed.

PO Resp. 13, 24.

Additionally, Patent Owner takes issue with Dr. Kamrin’s reliance on Donaldson’s Figures 2–5 separate from the accompanying written disclosure. *Id.* at 24–25 (citing Ex. 1012, 4:12–13; Ex. 2065, 59:18–60:7). In this respect, Patent Owner contends that Petitioner’s “pressure differential” arguments preferentially rely on Figures 2–5 of Donaldson, and are inconsistent with the text of Donaldson. *Id.* at 24–25. Further, Patent Owner asserts that “a pressure buildup in the balloon would not cause the balloon and O-ring to slide upward off the outer container on their own.” *Id.* at 26. Instead, Patent Owner argues that the balloon would fly off from the outer container in response to the buildup of air pressure before filling up, or the balloon would remain on the outer container and would fill with air (or possibly pop), but would not then detach on its own after it is filled. *Id.* at 26–27 (citing Ex. 2023 ¶ 36). In other words, Patent Owner contends that Donaldson does *not* disclose expressly or inherently that (1) Donaldson’s device detaches the balloon through a pressure differential or that, (2) even assuming a pressure differential exists in Donaldson, Donaldson’s O-ring would perform the claimed function of recited elastic fastener. *Id.* at 24–26.

Further in response to Petitioner’s inherency arguments, Patent Owner also contends that Donaldson’s device applies a different type of force. *Id.* at 33–34. Patent Owner argues that the range of force for detachment by filling, shaking, or the combination “is a fraction of the force that can be applied by the direct mechanical action taught by Donaldson . . . [and] [s]uch direct mechanical force is virtually unlimited and could overcome a connecting force of thousands of pounds using the mechanical devices of the prior art. *Id.* at 33–34 (citing Ex. 2023 ¶ 41). As such, Patent Owner argues that it is not inherent that the prior art containers would release by partially

filling and/or shaking. *Id.* at 34 (citing Ex. 2023 ¶ 41).

c. Analysis

(1) Alleged “Pressure Differential” Embodiment of Donaldson

As a threshold matter, and for clarity of the record, we determine that Petitioner’s proposed “pressure differential” theory of how Donaldson operates is not supported by sufficient evidence.⁵ In the Petition, Petitioner relies on a mixture of the text and Figures 1–5 of Donaldson to describe the operation of Donaldson. Pet. 35–36. In particular, although the text of Donaldson describes the inner container 16 as moving downward to eliminate the seat for the balloon, (Ex. 1012, 4:65–5:3), the Petition appears to reconcile the text, with Figures 1–5, by arguing that it is not the movement of pressurized container 16 that causes the balloon to release, but rather a combination of the outer container 12 and the “the pressure in the balloon push[ing] outward on the balloon’s membrane with a force large enough to overcome the force holding the balloon on the tube.” *See* Pet. 35–36 (citing Ex. 1012, 4:65–5:3; Ex. 1020 ¶ 83).

Yet, the cited text of Donaldson does not support the Petition’s description of Donaldson’s operation. First, Donaldson’s text describes the pressurized container 16 as moving, not the outer container 12. Second, Donaldson’s text does not describe the pressure in the balloon as overcoming the force holding the balloon on the tube, but rather the movement of pressurized container 16 as “causing the surface on which the

⁵ For the remainder of Petitioner’s factual assertions with respect to the operation of Cooper, Saggio, and Donaldson, individually and respectively, we find that they are supported by sufficient evidence.

O-ring 20 is seated to disappear” and that “[a]s soon as this seating surface disappears, the O-ring is released and pulls the balloon off of the device” Ex. 1012, 4:65–5:3.

Additionally, for this theory, Dr. Kamrin’s cited testimony does not discuss the movement of any component, but instead states that “[a]fter the balloon is inflated to a threshold pressure, the pressure in the balloon pushes outward on the balloon’s membrane with a force large enough to overcome the force holding the balloon to the tube.” Ex. 1020 ¶ 83 (citing Ex. 1012, 4:65–5:3). Dr. Kamrin contends that “[a]s the balloon slides upward, the O-ring is released and pulls the balloon off of the tube.” *Id.* (citing Ex. 1012, 5:3–6). Dr. Kamrin also later testifies that “Donaldson teaches that the O-ring slides off after the balloon is expanded with a pressurized gas and the tube is withdrawn.” *Id.* ¶ 131 (citing Ex. 1012, 5:3–6).

In its Reply, Petitioner appears to contend that Donaldson discloses two embodiments. Reply 6–7. The first is consistent with the text of Donaldson described above, where the inner tube (pressurized container 16) moves relative to the outer tube (outer container 12), and, thus, causes the O-ring to detach. *Id.* (citing Ex. 1012, 4:53–5:6). The second alleged embodiment is based solely on the figures of Donaldson. *Id.* In this second alleged embodiment, Petitioner contends that the balloon detaches due to a pressure differential, because the pressurized gas inside the balloon membrane is pushing outward more than the air pressure from the outside pushes inward on the balloon. *Id.* (citing Ex. 2065, 173:16–181:17).

In reviewing Donaldson, we do not agree with Petitioner that Figures 1–5, and the cited portion of Donaldson (Ex. 1012, 4:65–5:3), each discloses a separate embodiment. We are mindful that it does not matter

whether Donaldson's figures are incorrect, the issue here is whether the evidence supports a finding that Donaldson's figures would disclose the alleged second embodiment. *See In re Wagner*, 63 F.2d 987, 988 (CCPA 1933) ("While it is true that drawings may not always be relied upon for anticipation of a later application, it is also true that, if a drawing clearly suggests to one skilled in the art the way in which the result sought is accomplished by a later applicant, it is immaterial whether the prior patentee's showing was accidental or intentional.") (internal citations omitted); *see also In re Mraz*, 455 F.2d 1069, 1072 (CCPA 1972) ("[W]e did not mean that things patent drawings show clearly are to be disregarded."); *In re Seid*, 161 F.2d 229, 231 (CCPA 1947) ("[A]n accidental disclosure, if clearly made in a drawing, is available as a reference."). Having said that, we find the weight of the evidence here does not support such a finding.

To begin with, we note that Donaldson indicates that column 4, line 65 to column 5, line 6 describes the same embodiment as Figures 1–5. *See* Ex. 1012, 4:65–5:6. Thus, the express text of Donaldson does not support a conclusion that Figures 1–5 and the cited portion of Donaldson are two different embodiments. The only evidence offered by Petitioner to support this second embodiment theory is the testimony of Dr. Kamrin. Reply 7 (citing Ex. 2065, 173:16–181:17). Nonetheless, we have reviewed the cited testimony, and are not persuaded.

Beginning with the Kamrin Declaration, Paragraph 83 espouses a similar theory of operation as the second embodiment, but the Kamrin Declaration does not cite the figures as supporting such a theory. *See* Ex. 1020 ¶ 83. Instead, Dr. Kamrin cites the text of Donaldson, *id.* (citing Ex. 1011, 4:65–5:3), which both parties now agree does not support the alleged

second embodiment, *see* Reply 6–7. Moreover, the Kamrin Declaration is not even internally consistent on this point. As we discussed above, Dr. Kamrin later discusses the movement of the containers in Donaldson as causing the release of the O-ring. Ex. 1020 ¶ 131.

Dr. Kamrin’s cross examination testimony on this point, like his Declaration, is also inconsistent.⁶ Specifically, Dr. Kamrin begins by characterizing the text of Donaldson as “a little hard to read,” and that he believes “it’s best to refer to the figures so that’s how I read it.” *Id.*, 23:13–19. Dr. Kamrin then goes on to explain that “you should default to the figures” of Donaldson, and makes clear he is relying on the figures, not the text. *Id.* at 23:20–25:15. Later in his testimony, however, he extensively discusses the movement of the cylinders in Donaldson, and appears to rely on the text. *Id.* at 44:11–48:5. Dr. Kamrin then, however, reverts back, and repeatedly characterizes the text of Donaldson as “ambiguous.” *See, e.g., id.* at 111:8–22, 114:5–23, 116:14–117:6, 127:13–128:2, 148:23–149:2. This lack of consistent and persuasive testimony on Donaldson’s teachings leads us to give little weight to Dr. Kamrin’s testimony regarding this proposed “pressure differential” embodiment and also leads us to give little weight to Dr. Kamrin’s testimony regarding the motivation to combine the references. In contrast, we find that, on the topic of the scope of teachings of Donaldson, Dr. Kudrowitz gave testimony that is internally consistent and consistent with the text of Donaldson. Ex. 2023 ¶¶ 22–26, 28, 35, 36. Thus, we

⁶ We note that in this testimony, Dr. Kamrin does not characterize the figures and test as alternative embodiments, as Petitioner does now in its Reply (Ex. 2065, 44:11–48:5), making his simultaneous reliance and disparagement of the same text for the same embodiment not credible.

determine that Dr. Kudrowitz’s testimony on this topic is entitled to substantial weight. In sum, we determine that evidence shows that Donaldson teaches one embodiment, consistent with its text, where the mechanical movement of pressurized container 16 causes the surface on which O-ring 20 is seated to disappear and releases the balloon. Ex. 1011, 4:65–5:6; Ex. 2023 ¶¶ 22–26, 28, 35, 36.

(2) Reasons to Substitute

As discussed above, the parties dispute whether one of ordinary skill in the art would have substituted Donaldson’s O-ring for the self-sealing internal elastic membrane in Saggio. *See* PO Resp. 39–40. First, Petitioner asserts that it would have been obvious to make this substitution because “Donaldson teaches another, simpler, cheaper –and commercially available –means for sealing fluid within a balloon.” Pet. 49 (citing Ex. 1020 ¶ 123). Second, Petitioner asserts that a POSA would have replaced Saggio’s sealing mechanism with Donaldson’s O-ring because “Donaldson teaches a way to detachably hold balloons on a large number of tubes without having to use several sets of hands to hold them on Cooper’s hollow tubes.” Pet. 50 (citing Ex. 1010 ¶ 4; Ex. 1012, 1:18–49). For the reasons set forth below, we determine that, at best, Petitioner has made a weak showing on this issue.

With regard to Petitioner’s first argument, Petitioner does not provide, any support for this statement, other than a single citation to Paragraph 123 of Dr. Kamrin’s Declaration. Looking to Paragraph 123, Dr. Kamrin states that

In addition, as previously discussed, one of ordinary skill in the art would have had good reasons [to] modify Cooper in view of Saggio with the addition of an O-ring, such as the one taught in Donaldson. One of ordinary skill would have recognized that O-rings are simpler and cheaper ways of accomplishing the

same self-sealing task taught in Saggio.

Ex. 1020 ¶ 123. Dr. Kamrin does not provide the underlying facts or basis for his conclusion, which merely parrots what is stated in the Petition. *Id.* Further, in Petitioner's Reply, Petitioner does not provide any other support for this proposition, and, instead, attempts to improperly shift the burden to Patent Owner to "deny that Donaldson's O-ring is both a cheaper and a simpler sealing option than Saggio's internal membrane." Reply 13.

Weighed against the complete evidence in the record, we determine that these unsupported statements by Petitioner and Dr. Kamrin are insufficient to demonstrate, by a preponderance of the evidence, that one of ordinary skill in the art would have had reason to combine the references in the manner proposed by Petitioner. More specifically, Petitioner cites solely to Dr. Kamrin's conclusory testimony for this proposition, but the corresponding identical statements in Dr. Kamrin's Declaration cannot be considered an adequate basis for his conclusion. Thus, at best, Dr. Kamrin's testimony is entitled to minimum weight in this regard and does not support Petitioner's otherwise conclusory position. Moreover, as we determined above, Dr. Kamrin's testimony regarding the operation of Donaldson was flawed. We believe this flawed understanding of how Donaldson operates also taints his testimony regarding why someone would pluck the fastener from Donaldson to use in Saggio because it calls into question his underlying assumptions and understandings on which he based his analysis of the combination of these references. Thus, for all these reasons, we give Dr. Kamrin's testimony on this issue minimal weight. *See In re Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1368 (Fed. Cir. 2004) ("[T]he Board is entitled to weigh the declarations and conclude that the lack of factual

corroboration warrants discounting the opinions expressed in the declarations.”); *see also* 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”). In addition, Dr. Kudrowitz has explained that the proposed substitution is not as simple as Petitioner contends that it would have the disadvantages of increasing parts count and that “[r]epeatedly installing tiny O-rings to clamp the balloons . . . would be tedious and time-consuming.” Ex. 2023 ¶ 44.

Further, we are not persuaded otherwise by Petitioner’s argument that Patent Owner has failed to refute Dr. Kamrin’s testimony. Petitioner, not Patent Owner, has the burden to show, by a preponderance of the evidence, a reason why one of ordinary skill in the art would have combined the prior art references to arrive at the invention. 35 U.S.C. § 326(e); 37 C.F.R. § 42.1(d). This burden cannot be satisfied by conclusory statements, and more importantly, does not shift to the Patent Owner. *See In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016) (a petitioner cannot satisfy its burden of proving obviousness by employing “mere conclusory statements.”).

In making this determination, we do not dismiss Petitioner’s position that “[a]n implicit motivation to combine exists when ‘the combination of references results in a product or process that is more desirable, for example because it is stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient.’” Pet. 49 (quoting *DyStar Textilfarben GmbH & Co. v. CH Patrick Co.*, 464 F.3d 1356, 1368 (Fed. Cir. 2006)). While we have considered this argument, we, nonetheless, follow the Federal Circuit’s guidance that the obviousness inquiry cannot be met by conclusory

statements, but rather must be “thorough and searching.” *See In re Nuvasive*, 842 F.3d 1376, 1383 (Fed. Cir. 2016) (holding conclusory statements insufficient if not supported by a reasoned explanation) (citing *In re Lee*, 277 F.3d 1338, 1342 (Fed. Cir. 2002) (“The factual inquiry whether to combine references must be thorough and searching.”)). Moreover, “we must still be careful not to allow hindsight reconstruction of the references to reach the claimed invention without any explanation as to how or why the references would be combined to produce the claimed invention.” *See, e.g., Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1368 (Fed. Cir. 2012) (quoting *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1374 n.3).

Turning to the merits of this substitution, we do not agree that Petitioner can satisfy its burden solely with an unsupported statement that the proposed substitution would be “simpler” or “cheaper,” especially in light of the differences between Saggio and Donaldson’s devices. For example, Saggio teaches a “tie-less or “tie-free” self-sealing water balloon that does not have an elastic fastener and, instead, uses an internal sealing member that is part of the balloon. Ex. 1010 ¶¶ 5, 18. In contrast, Donaldson, on the other, teaches a mechanically actuated device for inflating a balloon with pressurized gas, not water, and the use of an O-ring on the outside of the balloon. Ex. 1012, 2:30–5:6. Thus, given these seemingly contrary differences between Saggio and Donaldson, we do not agree with Petitioner that the proposed combination is so straightforward or simple that it requires no further articulated reasoning with some rational underpinnings, i.e., the underlying basis to support the conclusion that replacing an internal sealing member with an external O-ring is cheaper or simpler.

Moreover, while Petitioner contends that it relies on Donaldson solely for the O-ring, (Pet. 50 n.7), Petitioner, nevertheless, relies on the operation of the Donaldson device for its position that the O-ring would perform the recited functions of the claimed elastic fastener. In this regard, we do not ignore Donaldson's teaching of how the O-ring functions in the context of the Donaldson's device, because Petitioner itself relies on this disclosure for its arguments. *See* Pet. 51–52. To that end, Petitioner needed to explain further why POSA would have reasonably expected these relied-upon functions of Donaldson to have operated in a similar fashion on the system of Saggio.

In reviewing the arguments and evidence presented, we recognize that it is axiomatic that bodily incorporation is not required. *See, e.g., In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012) (“It is well-established that a determination of obviousness based on teachings from multiple references does not require an actual, physical substitution of elements.”). To be clear, we are not suggesting that Petitioner must explain how Donaldson's device could be physically incorporated into Saggio's system. Rather, we determine that Petitioner's explanation is incomplete, because it does not adequately explain why one of ordinary skill in the art would have made the proposed substitution of one component for another, especially in light of the seemingly contrary differences between the prior art devices.

With respect to Petitioner's second proposed reason for the substitution, we note that in column 1, lines 18 through 49 of Donaldson, Donaldson states:

While balloons have a myriad of uses, there is one factor which is common to all such uses. To wit: the balloons must generally be inflated to achieve the desired effect. This may not

be a problem of only one or two balloons are use; however, if there are a great number of balloons, such factor can be an annoyance or an inhibition to the use of balloons.

Therefore, the art has included several examples of devices for inflating balloons. Such devices generally attach the uninflated balloon to a source of pressurized gas, such a Helium. The source of gas is generally spaced from the balloon, contains enough gas for a multitude of balloons and includes a special valve to which the balloon is manually attached for inflation and from which the inflated balloon is manually detached after inflation. An example of such devices is disclosed in U.S. Pat. No. 4,142,322.

While effective, such devices are often expensive and generally are not designed for use by children. Such designs thereby preclude one source of fun and entertainment at a party while keeping the job of inflating balloons in the category of drudgery.

While the art also includes devices for inflating signal balloons, see for example the device disclosed in U.S. Pat. No. 3,727,229, or for inflating devices such as life preservers, see for example the device disclosed in U.S. Pat. No. 2,786,599, such devices are intended for a one-time only use and are designed for ruggedness and reliability as opposed to multiple uses which are intended to be entertaining.

Therefore, there is a need for a balloon inflating device which is easy and fun to use especially for children and which can be re-used.

Ex. 1012, 1:17–49. Although Donaldson mentions that it may be an annoyance or inhibition to inflate a great number of balloons, we do not see where, in this cited passage, “Donaldson teaches a way to detachably hold balloons on a large number of tubes without having to use several sets of hands to hold them.” *Id.*; *see* Pet. 49–50. Petitioner further cites to Saggio for support, but Saggio does not discuss the Donaldson device, and unsurprisingly, does not describe Donaldson as teaching “a way to

detachably hold balloons on a large number of tubes.” Ex. 1010 ¶ 4 (Paragraph 4 describes Saggio’s system/method as “providing [for] a plurality of water balloons relatively quickly.”). Thus, Petitioner’s statements here are also unsupported by the record.

In addition, Petitioner also argues that “[o]nce one skilled in the art chose to use such an O-ring, they obviously would use an O-ring capable of clamping the balloon with appropriate force to permit easy detachment without tearing. (Ex. 1020 ¶132.)” Pet. 52–53. Petitioner adds that “one of ordinary skill in the art would have known that any O-ring used to attach Saggio’s balloons to Cooper’s tubes should be (and could be) designed to be of such a strength to perform those functions—and doing so would have been a rudimentary task. (Ex. 1020 ¶132.)” Pet. 52.

Even assuming these arguments to be correct, Petitioner’s position takes for granted that one of ordinary skill *could* use an O-ring (e.g., Donaldson’s O-ring) in place of Saggio’s internal sealing membrane without explaining why one *would* do so. That a substitution *could* be made, is not sufficient to show that a substitution *would* have been made. *In re Giannelli*, 739 F.3d 1375, 1380 (Fed. Cir. 2014) (indicating that the Board should have determined whether it would have been obvious to modify the prior art apparatus to arrive at the claimed invention and finding the mere capability to do so insufficient). Further, we are not persuaded by Petitioner’s arguments that “Donaldson teaches that inflating balloons should be easy for children, and its O-ring allows the balloon to be detached from the hollow tube upon application of a force.” Pet. 52 (citing Ex. 1020 ¶ 132; Ex. 1012, 1:47–49, 4:53–5:10). In particular, Dr. Kamrin conceded during cross-

examination that Donaldson does not teach that children can detach balloons from the Donaldson device. Ex. 2065, 183:17–184:15.

For these reasons above, we determine that, at best, Petitioner has, at best, made a weak showing that a person of ordinary skill in the art would have substituted the O-ring in Donaldson for the sealing member in Saggio. Next, we discuss secondary considerations below.

4. *Objective Indicia of Nonobviousness*

Notwithstanding what the teachings of the prior art would have suggested to one skilled in the art, objective evidence of nonobviousness (so called “secondary considerations”) may lead to a conclusion that the challenged claims would not have been obvious. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984). Objective evidence of nonobviousness “may often be the most probative and cogent evidence in the record” and “may often establish that an invention appearing to have been obvious in light of the prior art was not.” *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1349 (Fed. Cir. 2012). Patent Owner puts forth evidence of commercial success, licensing, copying, praise by others, long-felt, unresolved need, and failure by others. We agree with Patent Owner that its proffered evidence with respect to the objective indicia of non-obviousness weigh significantly in favor non-obviousness, as explained below.

a. *Nexus*

To be relevant, evidence of non-obviousness must be commensurate in scope with the claimed invention. *In re Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011). Thus, to be accorded substantial weight, there must be a nexus between the merits of the claimed invention and the evidence of secondary

considerations. *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995). Nexus is a legally and factually sufficient connection between the objective evidence and the claimed invention, such that the objective evidence should be considered in determining non-obviousness. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988). There is a “presumption of a nexus” when a product is “coextensive” with a patent claim. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 723 F.3d 1363, 1372 (Fed. Cir. 2013). The Federal Circuit has held that “if the marketed product embodies the claimed features, and is coextensive with them, then a nexus is presumed and the burden shifts to the party asserting obviousness to present evidence to rebut the presumed nexus.” *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000).

Patent Owner presents extensive evidence that the “Bunch O Balloons” product of its exclusive licensee, Zuru Ltd., embodies the claimed invention. *See* PO Resp. 47–53 (claim chart mapping Bunch O Balloons to claim 1), 64–69. Petitioner does not dispute that the Bunch O Balloons product is covered by claim 1. *See* Tr. 24:3–6. Reviewing Patent Owner’s evidence, we agree that Bunch O Balloons embodies the claimed features. Thus, we conclude that Patent Owner has shown that it is entitled to a presumption of a nexus between the Bunch O Balloons and the claimed invention.

“The presumption of nexus is rebuttable: a patent challenger may respond by presenting evidence that shows the proffered objective evidence was ‘due to extraneous factors other than the patented invention.’” *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1329 (Fed. Cir. 2016) (quoting *Demarco*, 851 F.2d at 1393). “Such extraneous factors include additional unclaimed

features and external factors, such as improvements in marketing.” *Id.*
“However, a patent challenger cannot successfully rebut the presumption
with argument alone—it must present evidence.” *Id.*

Petitioner argues that it met its burden of sufficiently rebutting the
presumption of the nexus. Pet. 74–75; Reply 18–20. In particular,
Petitioner asserts that it has shown that any success achieved by the Bunch O
Balloons product is not due to the unique characteristics of the claimed
invention, but rather is due to the extensive marketing and advertising
campaign related to the Bunch O Balloons product. Reply 18–20. Petitioner
argues that the named inventor, Josh Malone, admitted that “80% of the
success of [Bunch O Balloons] is due to factors other than product
innovation, including marketing.” *Id.* at 19. Petitioner also contends that it
has met its burden of showing that the Bunch O Balloons’ success is due to
features found in the prior art—namely, Saggio. Pet. 74. For the reasons
below, we determine that Petitioner has failed to meet its burden of rebutting
sufficiently the presumption of nexus.

To begin with, we do not agree that Petitioner has shown sufficiently
that Mr. Malone admitted that 80% of the success of Bunch O Balloons was
due to “other factors.” The evidence Petitioner relies on for this assertion is
an interview that Mr. Malone gave to National Public Radio’s
“Marketplace” program (“NPR Interview”) on July 17, 2017. Ex. 1051
(transcript of interview); Ex. 1052 (audio of interview). In the NPR
Interview, Mr. Malone was asked what was harder: bringing the idea to life
or “getting through the production and marketing process.” Ex. 1051, 2. In
response to this question, Mr. Malone responds that “[t]he production and
marketing process is always harder” and that “20 percent is the idea” and

“80 percent is the production and marketing and finance and everything else.” *Id.* at 2–3. Read in context, Mr. Malone does not allocate 80% of the success of Bunch O Balloons to marketing or innovation, but is, instead, discussing the relative amount of work that he expended at each phase of the process for bringing the Bunch O Balloons to market. *Id.* In any event, we do not find that his statements rise to the level of an admission that 80% of the success of the Bunch O Balloons was due to marketing and “other factors,” as Petitioner contends.

Petitioner also has failed to show sufficiently that the success of the Bunch O Balloons is attributable to features found in the prior art. For example, we do not consider Saggio’s inner membrane 18 to teach an “elastic fastener” that attaches things together, as required by claim 1, but, rather, find that Saggio’s inner membrane 18 functions as a one-way valve. *See supra* Section II.D.2(b). Further, Saggio does not disclose detachment based on shaking or the weight of the balloons, also as claimed. Thus, we are not persuaded that the prior art contains these key claimed features of the invention. Accordingly, we do not agree with Petitioner’s contention that the success of the Bunch O Balloons is based on features found in the prior art.

Finally, Petitioner asserts it was Patent Owner’s public relations firm that drove the success of Bunch O Balloons. In particular, Petitioner and Mr. Scott Steinberg, Petitioner’s declarant on commercial success, point to the failure of Mr. Malone to find a toy manufacturer who was interested in the claimed invention, before he hired a marketing firm to help him promote it, is by itself sufficient to overcome the presumption of nexus. Pet. 74–75; Reply 19 (arguing that Tinnus does not mention “that prior to the Kickstarter

campaign—and prior to hiring the PR firm—Malone showcased BOB⁷ at a toy fair . . . yet his product did not achieve any interest or traction.”). We disagree. By narrowly focusing on a single toy fair where Mr. Malone, by himself, attempted to sell his toy without success, Petitioner attempts to ignore what we find to be otherwise compelling evidence with respect to the sustained and growing success of the Bunch O Balloons. The fact that Mr. Malone, who had limited experience in the toy industry, *see* Ex. 2026 (Malone Declaration) ¶¶ 2–4 (describing Mr. Malone’s background), needed help raising initial awareness of his idea is unsurprising. What Petitioner has failed to explain is how this pre-manufacturing promotion accounts for the Bunch O Balloons continuing and ongoing success in a manner sufficient to rebut the presumption of nexus. Indeed, we also determine that Mr. Malone’s initial marketing efforts to promote his invention are not so exceptional as to overcome the presumption that, practically speaking, it was the merit of the idea that drove the success of the Bunch O Balloons. We further agree with and give substantial weight to the testimony of Mr. Christopher Byrne, Patent Owner’s commercial success expert, on this point. *See* Ex. 2025 ¶¶ 53–54. As Mr. Byrne persuasively explains, almost all toys involve extensive marketing campaigns, but for a toy of this type—water balloons, which are largely considered a commodity product, something that “fundamentally transform[s] the play experience of these products” is required. *See id.* ¶ 54. We also find persuasive and give substantial weight to the testimony of Dr. Kudrowitz, who testified that:

⁷ The parties refer to “Bunch O Balloons” as “BOB.”

In my experience, advertising alone is insufficient to create the kind of success experienced by Bunch O Balloons and its imitations. It is necessary to have a fundamentally novel and creative idea. That being said, I have seen no evidence that ZURU marketed Bunch O Balloons differently than their other products or than their other water toys. The commercial success of Bunch O Balloons must, therefore, be a result of the novel and patented aspects of the product. The success of Mr. Malone’s Kickstarter campaign is further evidence of this.

Ex. 2013 ¶ 104. We further agree with Dr. Kudrowitz that the significant and overwhelmingly positive response that Mr. Malone received to his “Kickstarter” campaign suggests that the merits of the invention are what has driven the success of the product, and not merely advertising. Ex. 2013 ¶¶ 99–101 (discussing Kickstarter campaign and its success).

As for the testimony of Mr. Steinberg, Petitioner’s expert on commercial success, we find that his narrow focus on the alleged lackluster results of Mr. Malone’s initial efforts to exhibit the product at the New York Toy Fair, Ex. 1066 ¶¶ 8–19, fails to account for the prevalence of the marketing in the toy industry and the sustained success the product has had. Thus, we give Mr. Steinberg’s testimony, on the point of nexus, little weight. In sum, we find that the rebuttal evidence presented by Petitioner, even when taken together, fails to meet the burden of rebutting sufficiently the presumption of a nexus between the Bunch O Balloons product and the various indicia of non-obviousness discussed below.

b. Commercial Success

Patent Owner argues that the Bunch O Balloons product is an “incredibly successful product,” with at least 25 million units of sales and \$136 million in revenue in the United States. PO Resp. 57 (citing Ex. 2014 ¶ 7; Ex. 2025 ¶ 22; Ex. 2053, Workpage 15). Patent Owner submits that, in

“an absolute sense, the magnitude of these sales figures (in both units and dollars) combined with the facts that it is ZURU’s number-one selling product and that ZURU itself considers [Bunch O Balloons] to be ‘incredibly’ successful, demonstrates that [Bunch O Balloons] is a commercial success.” *Id.* (citing Ex. 2025 ¶ 22). Patent Owner asserts that Bunch O Balloons “created an entirely new market for a toy that can fill and seal water balloons at the same time.” *Id.* (citing Ex. 2025 ¶ 50). Patent Owner contends that this market consists of two main players—the Bunch O Balloons product and Petitioner’s Battle Balloons product. *Id.* at 57–58 (citing Ex. 2025 ¶¶ 49–50). Patent Owner notes that this is consistent with the district court’s findings in the related litigation. *Id.* at 58–59 (citing Ex. 2003 (Magistrate Judge’s Report and Recommendation); Ex. 2010 (district court’s opinion adopting the Magistrate Judge’s Report and Recommendation)). Finally, Patent Owner argues, based on reports from NPD Group, Inc. (“NPD Reports”), Bunch O Balloons has substantial sales in the “Water/Sand Toys & Accessories” category and has experienced “extraordinary” sales growth. *Id.* at 58–64.

Petitioner argues that Patent Owner’s evidence does not support a finding of commercial success. Reply 14–18. First, Petitioner argues that Patent Owner’s sales figures are not reliable, because they include products other than Bunch O Balloons, and even if they were accurate, that “sales figures alone, without market share data, are not sufficient to establish commercial success.” *Id.* at 15–16 (citing *In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996)). Second, Petitioner argues that the NPD Reports are “unreliable and/or were not provided as evidence to [Patent Owner’s] Response.” *Id.* at 16–18. Third, Petitioner contends that Patent Owner’s

arguments regarding Petitioner's own sales are insufficient to support its assertion with respect to commercial success, because Patent Owner has not offered any information or evidence regarding Petitioner's sales. *Id.* at 18.

We agree with Patent Owner that Bunch O Balloons has enjoyed significant commercial success. In particular, we determine that Patent Owner's sales of over 25 million units and \$136 million demonstrates this commercial success. *See* Ex. 2025 ¶ 22; Ex. 2053. Petitioner's main argument otherwise is that "sales figures alone, without market share data, are not sufficient to establish commercial success" does not accurately reflect the law. We acknowledge that sales figures alone, are normally only, at best, very weak evidence of commercial success. *See In re Huang*, 100 F.3d at 140 (noting "evidence related solely to the number of units sold provides a very weak showing of commercial success, if any"). The Federal Circuit has also stated, however, that "[a]lthough sales figures coupled with market data provide stronger evidence of commercial success, sales figures alone are also evidence of commercial success." *Tec Air, Inc. v. Denso Mfg. Mich. Inc.*, 192 F.3d 1353, 1361 (Fed. Cir. 1999) (collecting cases, including *Huang*). Accordingly, while certainly more concrete and specific evidence, with respect to market share data, would have been helpful, nevertheless, given the other supporting evidence proffered, we have no trouble in characterizing the undisputed sales, by Patent Owner, of over 25 million units and \$136 million dollars as significant.

Specifically, here, even without the NPD Reports, Patent Owner has also offered evidence that shows the unique circumstances, present in this case, that indicate why there are certain unique circumstances present in this case why the sales figures are sufficient to demonstrate commercial success.

In particular, we find persuasive the testimony of Patent Owner's expert, Mr. Byrne, who explained that Bunch O Balloons has created an entirely new market for a toy that can fill and seal water balloons at the same time. Ex. 2025 ¶ 49. Mr. Byrne explains that prior to Bunch O Balloons there were no commercially-available toys for filling and sealing multiple balloons at the same time, and that, at least in 2016, this new market was entirely dominated by Bunch O Balloons and Petitioner's product. *Id.* This testimony is consistent with the findings of the district court in one of the related litigations. Ex. 2010. In granting a preliminary injunction on the '066 patent, the district court found that Bunch O Balloons and Petitioner's product "directly compete with each other and are the only two competitors in the mass water balloon market." *Id.* at 16. The district court made similar findings in granting the preliminary injunction on the '282 patent. *See* Ex. 2003 (finding that Bunch O Balloons and Petitioner's products directly compete with each other).

Moreover, Patent Owner has adduced evidence that Petitioner considers its competing product to be a commercially successful product because, in 2016, Petitioner had sold [REDACTED] units through April. Ex. 2031, 33:7–15. Moreover, Petitioner's president, Mr. Khubani, testified that he considered Petitioner's product a success, in part, based on its number of units sold. *See* Ex. 2025 ¶¶ 40–43 (summarizing Mr. Khubani's testimony). Again, Bunch O Balloons sales have been over 25 million units and \$136 million, far exceeding the level of sales that Petitioner's own executives considered successful. Thus, by Petitioner's own measures of success in this two player market, Bunch O Balloons has been a success.

Petitioner also argues that Patent Owner’s sales figures contains sales of products not covered by the ’282 patent. Reply 15. Petitioner, however, provides almost no explanation, and minimal evidence, to meet its burden in support of this argument. Specifically, it merely cites some pictures of products that, as best as we can understand, it contends are not covered by the ’282 patent. *See id.* at 15 (citing Exs. 1058–1062). Petitioner, however, has not explained, and we are unable to ascertain independently, why the products shown in the pictures would not be covered by the ’282 patent. For example, Exhibit 1062 shows a packet of “Minions” Bunch O Balloons and Exhibit 1058 shows Bunch O Balloons, a nozzle, and what appears to be a scoop. The burden of persuasion lies with the Petitioner. 35 U.S.C. § 326(e). Yet, given this burden, Petitioner fails to explain at all why a Bunch O Balloons product that is sold with a “Minions” design or other accessories should be entirely excluded. Petitioner also complains that Mr. Byrne failed to confirm the accuracy of the data. *Id.* Again, however, Petitioner has the burden, and yet fails to point to any reason it has to doubt these numbers or basis to question them. Petitioner’s quibbles with this evidence fails to persuade us that we should not give Exhibit 2053 significant weight, and that it fairly represents the sales of the Bunch O Balloons.

Thus, based on the evidence provided by Patent Owner, we agree that Patent Owner has shown that Bunch O Balloons has experienced significant commercial success, and, further, that Petitioner has failed to meet its burden of dissuading us otherwise.

c. Industry Praise

Praise from industry participants, especially competitors, is probative as to obviousness because such participants “are not likely to praise an obvious advance over the known art. Thus, if there is evidence of industry praise of the claimed invention in the record, it weighs in favor of the non-obviousness of the claimed invention.” *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1053 (Fed. Cir. 2016) (en banc).

Patent Owner presents evidence of several awards the Bunch O Balloons has won. PO Resp. 54–56. These awards include the 2016 Toy Award for the “SchoolKids” category at Spielwarenmesse, a global toy fair hosted in Nuremberg, Germany. PO Resp. 54 (citing Ex. 2047; Ex. 2022 ¶ 56). Patent Owner asserts that the award cites the ability to fill and seal multiple water balloon at once and the use of shaking to remove the balloons as notable features of the toy. *Id.* at 54–55 (citing Ex. 2047). Patent Owner also identifies the award in February 2017 by the Toy Industry Association (“TIA”) of the Active/Outdoor Toy of the Year Award. *Id.* at 55 (citing Ex. 2025 ¶ 58; Ex. 2051). Patent Owner explains that the Toy Industry Association voting process is based on input by the toy industry, media, and consumers. *Id.* at 55 (citing Ex. 2025 ¶ 58). Patent Owner asserts that the TIA particularly emphasized the innovative “self-tying” feature of Bunch O Balloons. *Id.* (citing Ex. 2051; Ex. 2025 ¶ 58). Patent Owner also notes that Bunch O Balloons won the overall “Toy of the Year” distinction in addition to winning the Outdoor category, at the 2015 Australian Toy Association Product of the Year Awards in Melbourne. *Id.* (citing Ex. 2047; Ex. 2025 ¶ 57).

Petitioner responds that Patent Owner's expert lacks knowledge of the criteria for most of the awards, except for one he was involved with, so we should give the evidence little weight because of his lack of knowledge and alleged "bias." Reply 20–21.

We are persuaded that Patent Owner has established that the patented invention has received significant industry praise. We have reviewed the testimony of Mr. Byrne, and although we agree with the Petitioner that he was not aware of the criteria for some of the awards, and that the weight of his testimony for those awards should be discounted somewhat, we find that Mr. Byrne was clearly familiar of the criteria of the Toy Industry Association award for which he was involved. Ex. 1030, 133:18–135:10. And for that award, we are not persuaded by Petitioner's contention that because Mr. Byrne was involved in awarding the award, he is somehow biased. Reply 21. Petitioner fails to provide any explanation why his involvement in the award would "bias" him. To the extent Petitioner believes that Mr. Byrne's involvement will lead him to exaggerate the importance of the award, we have taken that into account. Yet, we still find the 2016 Toy Industry Award to be significant evidence of industry praise.

We also find significant the 2016 Toy Award for the "SchoolKids" category at Spielwarenmesse that Bunch O Balloons received. Ex. 2047; Ex. 2025 ¶ 55. Although Patent Owner did not provide details about the exact criteria used, Patent Owner did provide biographies of the jury that awarded the award and the award citation. Ex. 2047, 4 (award citation), 5–8 (biographies of award jury). We find that the jury involved a number of people with experience in the toy industry, and further find that the award citation specifically called out various patented features of the claimed

invention. *Id.* at 5–8. As for the Australian toy award, we determine that it is entitled to some, although less, weight because of the lack of detail concerning the award provided by Patent Owner. Ex. 2025 ¶ 56; Ex. 2047; Ex. 2048. We do, however, determine that the Australian toy award is consistent with other toy awards, and further supports Patent Owner’s contention that the Bunch O Balloons has received significant industry praise. Ex. 2025 ¶ 56; Ex. 2047; Ex. 2048.

In sum, we determine that Patent Owner has shown that the Bunch O Balloons has received significant industry praise, and, further, that Petitioner has failed to meet its burden of dissuading us otherwise.

d. Copying

“Copying may indeed be another form of flattering praise for inventive features.” *Crocs, Inc. v. Int’l Trade Comm’n*, 598 F.3d 1294, 1311 (Fed. Cir. 2010). Copying “requires evidence of efforts to replicate a specific product.” *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed. Cir. 2010). “This may be demonstrated either through internal documents . . . ; direct evidence such as disassembling a patented prototype, photographing its features, and using the photograph as a blueprint to build a virtually identical replica . . . ; or access to, and substantial similarity to, the patented product (as opposed to the patent). . . .” *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1325 (Fed. Cir. 2004) (citations omitted). “We note, however, that a showing of copying is only equivocal evidence of non-obviousness in the absence of more compelling objective indicia of other secondary considerations.” *Ecolochem, Inc. v. S. Cal. Edison Co.*, 227 F.3d 1361, 1380 (Fed. Cir. 2000); *see also In re GPAC Inc.*, 57 F.3d at 1580 (“[M]ore than the mere fact of copying by an accused infringer is needed to

make that action significant to a determination of the obviousness issue.”) (quoting *Cable Elec. Prods. v. Genmark, Inc.*, 770 F.2d 1015, 1028 (Fed. Cir. 1985)).

Patent Owner has put forward compelling evidence of copying. *See* PO Resp. 71–76. Patent Owner has shown that Petitioner’s Balloon Bonanza product is nearly an exact duplicate of Patent Owner’s Bunch O Balloons product. *See* Ex. 2023 ¶ 68 (Patent Owner’s expert’s testimony comparing the products). Patent Owner has also provided evidence that Petitioner was aware of the product before designing its own product. *See* Ex. 2031, 33:7–15 (testifying that Petitioner had no water balloon products before Petitioner learned of Bunch O Balloons); Ex. 2057 (internal email of Petitioner discussing Bunch O Balloons); Ex. 2058 (internal email discussing Bunch O Balloons product). Furthermore, Patent Owner has provided internal documents from the Petitioner discussing their prototype, and describing how the product is “exactly like” the Bunch O Balloons product. Ex. 2059, TB0011–12 (noting the new product was “[t]ested and it works just like the Bunch O Balloons”), TB0015 (noting that the new product is like the Bunch O Balloons and “work[s] exactly like the original ‘Bunch O Balloons’”), TB00305 (noting that the new product “will have 37 filler rods and balloons (or more or less) like theirs and work exactly like the original ‘Bunch O Balloons.’”). Petitioner’s employees further confirmed that they [REDACTED]

[REDACTED] Ex. 2060.

Petitioner argues that there is no nexus between its copying and the claimed invention, because Patent Owner’s evidence of copying pre-dates the issuance of the ’282 patent or any of Patent Owner’s patents related to

this invention. Reply 22–23. Petitioner also argues that, absent evidence of failed development efforts by Petitioner, the evidence of copying is entitled to little weight.

We disagree with Petitioner that the fact that the evidence of copying pre-dates the issuance of the '282 patent obviates any nexus between the claimed invention and the copying evidence. As we explained above, copying is a form of “praise” for the invention. The significance of copying is that it demonstrates that there is some merit or value in the invention—not that it is to penalize Petitioner. This case demonstrates that well. This is not a case where the copying is directed to a small feature or improvement of an existing product, but of the copying of the entire product. We find that Petitioner had no multiple water balloon filling toy before it saw Patent Owner’s device. Ex. 2031, 21:9–25. We find further that it was only after it saw Patent Owner’s device, and appreciated its merits, that Petitioner decided to begin developing its own device. *See* Exs. 2057, 2058. In addition, we find that Petitioner did not seek to merely make a similar toy; it sought to make, as close as it possibly could, the same toy. Ex. 2059, TB0011–12 (noting the new product was “[t]ested and it works just like the Bunch O Balloons”), TB0015 (noting that the new product is like the Bunch O Balloons and “work[s] exactly like the original ‘Bunch O Balloons’”), TB00305 (noting that the new product “will have 37 filler rods and balloons (or more or less) like theirs and work exactly like the original ‘Bunch O Balloons.’”). At best, Petitioner’s argument suggests that we should lessen the weight of this evidence somewhat, but are unpersuaded that Petitioner has met its burden of showing that we should disregard it completely. To that end, we agree it is appropriate to diminish slightly the weight we give

this evidence, because the copying took place before the issuance of any patent. Even with that, however, we still determine that the above evidence of copying is entitled to significant weight.

We also disagree with Petitioner that failed development efforts are necessary to give weight to copying. While perhaps this may be true if the copying indicia were to stand alone, here, as we discussed above, there is other compelling evidence of secondary indicia. Accordingly, when this evidence of copying is taken together with the other objective evidence, the evidence of copying is entitled to significant weight, even in the absence of failed development efforts. *See Ecolochem, Inc.*, 227 F.3d at 1380; *In re GPAC Inc.*, 57 F.3d at 1580.

Patent Owner also contends that there are “knock-off products” on the various e-Commerce websites. PO Resp. 75–76. The supporting information provided, however, is only the number of listings on various websites, and the only cited evidentiary support, Paragraph 23 of Mr. Byrne’s Declaration, does not provide any corroboration for this information. *See id.* at 76 (citing Ex. 2025 ¶ 23 (“Bunch O Balloons has been ZURU’s number-one selling product of all time. *Id.* ZURU has launched many products and over 40 brands, and of these, Bunch O Balloons has been by far the most successful.”)). On these facts, we are unpersuaded Patent Owner has even met its burden of production on this issue. At a minimum, without more information and evidence to support this allegation, we agree with Petitioner that this evidence is entitled to almost no weight in the obviousness analysis.

e. Licensing

Patent Owner submits that the number of licensing inquiries—approximately 35 inquiries, which resulted in one exclusive license being granted—weighs in favor of non-obviousness. PO Resp. 76–77 (citing Ex. 2025 ¶ 19; Ex. 2014 ¶ 5). Petitioner responds that the cases cited by Patent Owner considered only actual licenses, not licensing inquiries. Reply 23. As for the license that was signed, Petitioner argues that it is “insufficient to overcome a strong *prima facie* showing of obviousness.” *Id.*

Courts “specifically require affirmative evidence of nexus where the evidence of commercial success presented is a license, because it is often ‘cheaper to take licenses than to defend infringement suits.’” *Iron Grip Barbell Co.*, 392 F.3d at 1324 (quoting *EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898, 908 (Fed. Cir. 1985)). The Federal Circuit has explained that “[w]hen the specific licenses are not in the record, it is difficult for the court to determine if ‘the licensing program was successful either because of the merits of the claimed invention or because they were entered into as business decisions to avoid litigation, because of prior business relationships, or for other economic reasons.’” *In re Cree, Inc.*, 818 F.3d 694, 703 (Fed. Cir. 2016) (quoting *In re Antor Media Corp.*, 689 F.3d 1282, 1294 (Fed. Cir. 2012)).

With respect to the licensing inquiries, we do not agree with Petitioner that inquiries are necessarily entitled to no weight, but we do agree that mere inquiries are less probative than actual signed licenses. Moreover, in this case, while Patent Owner has offered the number of inquiries and the names of most of the potential licensees, Patent Owner provides no further details of these “conversations.” *See* Ex. 2025 ¶ 19. We agree with Petitioner that

it is difficult to assess the seriousness of the discussions, and significance of any offers that might have resulted, without this information. Accordingly, we find this evidence to be, at best, a form of praise that is less persuasive than, and more accurately characterized as cumulative of, the evidence of praise by others considered separately above. Accordingly, we give the licensing inquiries themselves little weight.

As for the exclusive license with ZURU Ltd., the maker of the Bunch O Balloons product, we find this license entitled to some, but not significant weight. We find that this license certainly demonstrates interest in the invention and a willingness to pay for the exclusive rights to the invention. Again, without additional information and explanation from Patent Owner, however, about how the terms of this license compares to other licenses ZURU Ltd. has entered into, and other licenses in the industry, it is difficult to assess how much additional weight to give to this one license. Moreover, we have considered the commercial success of the licensed product, the Bunch O Balloons, separately above, and we consider the commercial success of that product overlaps with much of the value of the invention signified by this license. Thus, we give the license with ZURU Ltd. some, but not a significant amount of weight.

f. Failure by Others/Long Felt Need

Evidence of a long felt but unsolved need that is met by the claimed invention is further evidence of non-obviousness. *Millennium Pharms., Inc. v. Sandoz Inc.*, 862 F.3d 1356, 1369 (Fed. Cir. 2017). “Evidence of long-felt need is particularly probative of obviousness when it demonstrates both that a demand existed for the patented invention, and that others tried but failed to satisfy that demand.” *Id.* “[L]ong-felt need is analyzed as of the date of

an articulated identified problem and evidence of efforts to solve that problem.” *Tex. Instruments, Inc. v. U.S. Int’l Trade Comm’n*, 988 F.2d 1165, 1178 (Fed. Cir. 1993).

Patent Owner argues that “Bunch O Balloons also solved a problem to a long-felt need in the industry.” PO Resp. 80. Patent Owner asserts that “[p]rior to Bunch O Balloons, there was no product that allowed a person to fill multiple water balloons and quickly self-seal them.” *Id.* at 80. Patent Owner contends that “Petitioner’s own CEO and manager admitted that nothing like Bunch O Balloons (and its copy-cat clone Balloon Bonanza) existed before it, and that the invention solved a problem for consumers.” *Id.* (citing Ex. 2033, 54:10–21; Ex. 2027, 216:15–217:5). Petitioner argues that “[a]fter-the-fact articles praising BOB are not substitutes for actual articles and patents prior to [Bunch O Balloons] evidencing a “long-felt” need.” Reply 21.

We agree that Petitioner has shown sufficiently that Patent Owner has failed to establish that there was a “long-felt need.” We find that there is no dispute that the problem of filling multiple water balloons and tying them had existed for consumers, but, we also find that there is no evidence that this problem was recognized within the art until Saggio’s patent in 2011. *See In re Gershon*, 372 F.2d 535, 1070 (CCPA 1967) (“Since the alleged problem in this case was first recognized by appellants, and others apparently have not yet become aware of its existence, it goes without saying that there could not possibly be any evidence of either a long-felt need in the dentifrice art for a solution to a problem of dubious existence or failure of others skilled in the art who unsuccessfully attempted to solve a problem of which they were not aware.”). The lack of prior discussion could

suggest that, in practice, the problem was not a serious one, or that there were other satisfactory solutions. *See id.*

We also agree with Petitioner that the after-the-fact articles, present in the record, are not very probative of the question of long-felt need, because they are influenced by the invention and Patent Owner's own public relations campaign. *See Ex. 1037, 53:13–19.* At best, Patent Owner has shown that the need was recognized in 2011. We are persuaded that evidence of one isolated reference to the problem, a mere three years before the invention, demonstrates that this was not a long-felt need recognized in the industry, and, thus, is not entitled to significant weight in our obviousness analysis.

Patent Owner also contends that there is evidence of “failure by others.” PO Resp. 77–80. “The purpose of evidence of failure of others is to show indirectly the presence of a significant defect in the prior art, while serving as a simulated laboratory test of the obviousness of the solution to a skilled artisan.” *In re Cyclobenzaprine Hydrochloride Extended Release Capsule Patent Litig.*, 676 F.3d 1063, 1082 (Fed. Cir. 2012). Patent Owner argues that Dr. Saggio, the named inventor of the Saggio reference, “attempted, but failed, to solve the compound problem of providing an apparatus that could fill multiple water balloons at one time and eliminating the need to tie such water balloons.” PO Resp. 78. Patent Owner points to testimony by Dr. Saggio that he had not created the specialized balloon described in his reference and that the process to manufacture it would be “difficult.” *Id.* at 78–79 (quoting Ex. 2068, 37:19–38:17, 40:4–6).

We are not persuaded that Dr. Saggio's failure to manufacture the balloon, that he described in the Saggio reference, is evidence of “failure of

others.” An allegation of failure by others is not evidence of non-obviousness unless it is shown that widespread efforts of skilled workers having knowledge of the prior art had failed to find a solution to the problem. *In re Allen*, 324 F.2d 993, 997 (CCPA 1963) (“While appellant’s arguments imply that there may have been an unsolved problem in the art, an allegation to this effect is not evidence of unobviousness unless it is shown . . . that the widespread efforts of skilled workers having knowledge of the prior art had failed to find a solution to the problem.”). We are not persuaded that evidence of failure by Dr. Saggio alone establishes widespread failure by skilled workers in the art attempting to solve the same problem.

Moreover, even if we did consider Dr. Saggio’s efforts alone probative, Dr. Saggio’s testimony does not indicate that the balloon would not work, but merely that it would be “difficult” and expensive to manufacture and that he did not pursue it. *See Ex. 2068*, 37:19–38:17, 40:4–6. For this additional reason, we are persuaded that this ambivalent testimony does not establish that there was “failure of others” for obviousness purposes.

Patent Owner also points to the decision in *Leo Pharmaceutical Products, Ltd. v. Rea*, and argues that the age of these references and the passage of time between their public availability and the invention recited in claim 1 suggests non-obviousness. 726 F.3d 1346, 1356–57 (Fed. Cir. 2013). We disagree. As the Federal Circuit explained in *Nike, Inc. v. Adidas AG*,

812 F.3d 1326, 1337–38 (Fed. Cir. 2016)⁸, *Leo Pharmaceutical* stands for a narrower proposition than Patent Owner contends. As the court in *Nike* explained, “[t]he relevant portion of *Leo Pharmaceutical* stands for the proposition that the age of a reference can highlight the fact that no one in the art understood the problem to be solved.” *Id.* Indeed, “*Leo Pharmaceutical* recognizes the natural consequence of this idea: Persons of skill in the art cannot have tried and failed to solve the problem if they were never aware of that problem to begin with. Thus, the number of years that passed between the prior art and the claimed invention may be a relevant factor to underscore that skilled artisans had long failed to appreciate the problem solved by that invention.” *Id.* at 1338. Here, there is no question, at the time of the invention, that skilled artisans knew of the desire for self-sealing water balloons, because that problem is expressly recognized in *Saggio*. Thus, we are persuaded that *Leo Pharmaceutical* does not control the present case.

In sum, we determine the evidence of long-felt need, failure by others, and passage of time is not entitled to significant weight.

5. *Final Conclusion as to Obviousness*

We determined above that Petitioner has only barely shown that Donaldson accounts for the claimed fastener and has, at best, provided a weak showing that a person of ordinary skill would have been motivated to combine the references in the manner proposed. Against this weak showing

⁸ The portion of *Nike* discussing the burdens regarding a motion to amend was overruled by *Aqua Products, Inc. v. Matal*, 872 F.3d 1290 (Fed. Cir. 2017) (en banc), but the remainder of the case was not affected by *Aqua Products*.

on the scope and content of the prior art, Patent Owner has provided an overwhelming showing on the objective indicia of non-obviousness. The evidence of commercial success, industry praise, copying, and licensing, taken together, is abundant and compelling, and, thus, weighs prodigiously in favor of finding that claim 1 of the '282 patent (and dependent claims 2 and 3) would not have been obvious to a person of ordinary skill in the art at the time of the invention.

E. Petitioner's Motion to Exclude Evidence

Petitioner moves to exclude the following exhibits and testimony:

- (1) Paragraphs 29–34 and 46–82 of the Second Declaration of Dr. Barry Kudrowitz (“Second Kudrowitz Declaration”) (Ex. 2023);
- (2) Paragraphs 5–8 of the Declaration of Anna Mowbray (“Mowbray Declaration”) (Ex. 2024);
- (3) the entirety of the Declaration of Christopher Byrne (“Byrne Declaration”) (Ex. 2025);
- (4) Paragraph 3 of the Declaration of Eileen Brown (“Brown Declaration”) (Ex. 2035) and Exhibit A; and
- (5) Ex. 2052 (Bates No. ZURU-TX-034093-94; Email from Ms. Jocelyn Rizzi to Mr. James Nunziati). Mot. Exclude 1–2.

1. Timely Objections

Patent Owner initially argues that we should deny Petitioner's Motion to Exclude in its entirety, because Petitioner failed to timely file its objections as required by 37 C.F.R. 42.64(b)(1). Opp. 1–2. Petitioner concedes that it failed to file its objections, but responds that it served its objections on Patent Owner within the prescribed time. Mot. Reply 1. Petitioner requests that we excuse its error, because there is no prejudice to

Patent Owner. *Id.* We agree with Petitioner that the interests of justice weigh in favor of excusing its mistake. *See* 37 C.F.R. § 42.5(c)(3) (“A late action will be excused on a showing of good cause or upon a Board decision that consideration on the merits would be in the interests of justice.”). Patent Owner has made no showing of any prejudice, and we can discern none. The Final Rule adopting the requirement that objections be filed explains that the purpose is make the rule consistent with the Office Trial Practice Guide, which required that a party identify where in the record the objection was made. *See* Amendments to the Rules of Practice for Trials Before the Patent Trial and Appeal Board, 80 Fed. Reg. 28,561, 28,563 (May 19, 2015). The purpose of the rule was to facilitate this identification of the original objection. *Id.* Petitioner has now filed its objections in record, so the purpose of the rule is served. *See* Mot. Exclude, Exhibit 1. We also determine that there is an interest in deciding the parties’ motions on the merits, as opposed to on procedural errors for which no prejudice has been shown. On this basis, we excuse the lateness of the filing of Petitioner’s objections and decline to deny the motion for failing to file the objections.

2. *Second Kudrowitz Declaration*

a. *Paragraphs 29–34*

Petitioner argues that Paragraphs 29–34, which discuss Dr. Kudrowitz’s contentions that the figures in Donaldson are incorrect and should be modified to be consistent with the text of Donaldson, should be excluded under Federal Rule of Evidence 702, as speculative, and Federal Rule of Evidence 1002, the best evidence rule, because Donaldson’s original figures are the “best evidence of what is disclosed in the prior art.” Mot. Exclude 2. Petitioner argues that an expert cannot correct an issued patent,

and Dr. Kudrowitz never consulted Donaldson, the named inventor of the Donaldson reference, as to the accuracy of the corrections. *Id.* Patent Owner argues that Dr. Kudrowitz is not attempting to “correct” the actual drawings, but demonstrate how he believes Donaldson is not enabling. Opp. 3. As for the alleged violation of Fed. R. Evid. 1002 (the Best Evidence Rule), Patent Owner submits that it is not attempting to replace the original figures of Donaldson, but to “highlight the non-enablement of Donaldson.” *Id.* at 4.

We agree with Patent Owner that Petitioner has failed to demonstrate that these paragraphs of Dr. Kudrowitz’s testimony should be excluded. We have reviewed the challenged testimony and agree with Patent Owner that Dr. Kudrowitz is not actually “correcting” Donaldson, but instead, attempting to illustrate his contentions of how Donaldson would operate, and why he contends that it is not enabled. Expert witnesses are “permitted wide latitude to offer opinions, including those that are not based on firsthand knowledge or observation.” *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 592 (1993). Here, Dr. Kudrowitz has clearly identified the purpose and basis for his testimony and proposed “corrections.” We deem Petitioner’s concerns about Dr. Kudrowitz’s approach to go more to the weight rather than the admissibility of his testimony. *See i4i L.P. v. Microsoft Corp.*, 598 F.3d 831, 852 (Fed. Cir. 2010) (“When the methodology is sound, and the evidence relied upon sufficiently related to the case at hand, disputes about the degree of relevance or accuracy (above this minimum threshold) may go to the [expert] testimony’s weight, but not its admissibility.”).

As for the Best Evidence Rule objection, the Best Evidence Rule “requires not, as its common name implies, the best evidence in every case

but rather the production of an original document instead of a copy.” *Seiler v. Lucasfilm, Ltd.*, 808 F.2d 1316, 1318 (9th Cir. 1986). There is no dispute that the original version of Donaldson has been submitted into the record for us to rely upon. Moreover, we do not understand Patent Owner to be suggesting that we substitute these “corrected” figures for the actual figures of Donaldson. Instead, Patent Owner is merely relying on them as demonstratives to illustrate Dr. Kudrowitz’s testimony. Thus, Petitioner’s Best Evidence Rule objection has no merit. Accordingly, we deny Petitioner’s Motion to Exclude Paragraphs 29–34 of Dr. Kudrowitz’s testimony.

b. Paragraphs 46–82

Paragraphs 46–82 of Dr. Kudrowitz’s Declaration deal with secondary considerations of non-obviousness. *See* Ex. 2023 ¶¶ 46–82. Petitioner argues that we should exclude this testimony, because Dr. Kudrowitz, as Patent Owner’s technical expert, lacks adequate expertise regarding secondary considerations, and his testimony lacks sufficient basis in facts and data. Mot. Exclude 2–5. Patent Owner responds that Dr. Kudrowitz has extensive experience with the toy industry and teaches business aspects of the toy industry in his toy design course. Opp. 4–5. Patent Owner responds further that Dr. Kudrowitz’s testimony does identify the information on which he relied, and that Petitioner’s arguments go to the weight, not the admissibility of the evidence. *Id.* at 5–8.

We agree with Patent Owner that Petitioner’s arguments about Dr. Kudrowitz’s testimony go more to its weight than its admissibility. With respect to Dr. Kudrowitz’s qualifications, Rule 702 recognizes that people develop expertise in many ways and permits an expert to testify based on

“knowledge, skill, experience, training, or education.” Fed. R. Evid. 702. As Patent Owner explained, Dr. Kudrowitz has extensive experience in the toy industry and has taught courses that include business aspects of the toy industry. *See* Ex. 2013, 57–58; Ex. 2023 ¶ 6. As for Petitioner’s assertion that Dr. Kudrowitz’s testimony should be excluded because it lacks sufficient facts and data to support it, again, we determine that this assertion goes to the weight that we should give the evidence, and not its admissibility. We have reviewed Dr. Kudrowitz’s testimony, and it does contain citations to evidence that he contends supports his opinions. To the extent that he did not adequately consider any evidence that may be relevant, Petitioner has had the opportunity pursue those alleged weaknesses on cross examination, and we took all these factors into account, as appropriate. Thus, we deny Petitioner’s Motion to Exclude Paragraphs 46–82 of the Second Kudrowitz Declaration.

3. Mowbray Declaration and Exhibit 2052

a. Paragraph 5 and Exhibit 2052

Petitioner argues that Exhibit 2052 and Paragraph 5 of the Mowbray Declaration, which quotes from Exhibit 2052, should be excluded as hearsay. Mot. Exclude 7. Patent Owner does not dispute that Exhibit 2052 and Paragraph 5 include hearsay, but instead argues that an exception—specifically, the business records exception of Fed. R. Evid. 803(6)—applies.

Exhibit 2052 is an email dated August 18, 2016, from Jocelynn Rizzi of the firm NPD to James Nunziati of ZURU (the manufacturer of Bunch O Balloons). Ex. 2052, 1. Patent Owner relies, and Ms. Mowbray testifies in Paragraph 5, about following statements by Ms. Rizzi in the email: “Bunch

O Balloons has been having a tremendous summer season. It was the #1 selling toy in the overall US industry last week, and #1 toy in the Water/Sand Toys subcategory as well.” *Id.* We agree with Petitioner that the statement and testimony are inadmissible hearsay for which no exception applies. Although Patent Owner argues that ZURU kept and maintained the email in its regular course of business, that is not sufficient to establish that the statement by Ms. Rizzi contained in the email is admissible as a business record. *See, e.g., United States v. Cone*, 714 F.3d 197, 219–20 (4th Cir. 2013) (holding that merely stating that the emails were kept in the regular course of business is an insufficient foundation to admit them under the business records exception to hearsay); *In re Oil Spill by the Oil Rig DEEPWATER HORIZON in the Gulf of Mexico, on Apr. 20, 2010*, No. MDL 2179, 2012 WL 85447, at *3 (E.D. La. Jan. 11, 2012) (“As to the argument that the defendants regularly receive electronic mail as part of daily business activities and that their regular practice is to receive and retain such emails, if this was sufficient to invoke the business records exception, then all physical mail received by a defendant likewise would be a ‘business record.’ This cannot be the right result.”).

In this instance, Ms. Rizzi—an outsider to ZURU, which is the company that maintained the email—was the source of the information contained in the record. So, although Fed. R. Evid. 803(6) may provide an exception for one level of hearsay—that of the email itself created by the ZURU’s computer system—the source of the information contained in the email was from Ms. Rizzi, and her statements must fall within another hearsay exception to be admissible. *See United States v. Baker*, 693 F.2d 183, 188 (D.C. Cir. 1982) (“If both the source and the recorder of the

information, as well as every other participant in the chain producing the record, are acting in the regular course of business, the multiple hearsay is excused by Rule 803(6). However, if the source of the information is an outsider, Rule 803(6) does not, by itself, permit the admission of the business record. The outsider's statement must fall within another hearsay exception to be admissible because it does not have the presumption of accuracy that statements made during the regular course of business have.”). Patent Owner has made no such showing. Thus, we grant Petitioner's Motion to Exclude Exhibit 2052 and Paragraph 5 of the Mowbray Declaration that relies on Exhibit 2052.

b. Paragraphs 6–8

Paragraphs 6–8 of the Mowbray Declaration contain excerpts of certain reports obtained from the NPD Group, Inc. (the “NPD Reports”). *See Ex. 2024 ¶¶ 6–8*. Petitioner argues that Paragraphs 6–8 of Ms. Mowbray's Declaration should be excluded under Federal Rules of Evidence 901, as lacking proper authentication, and under Federal Rule of Evidence 802, as hearsay. *Mot. Exclude 6–7; Mot. Reply 2–3*. Patent Owner argues that the documents Ms. Mowbray testifies about are adequately authenticated and qualify for exceptions to the hearsay rule. *Opp. 8–9*. In particular, Patent Owner asserts that the NPD Reports, about which Ms. Mowbray is testifying in Paragraphs 6–8, qualify as an exception to hearsay under Fed. R. Evid. 802(17), “Market Reports and Similar Commercial Publications.” *Id.* at 9. Patent Owner contends that “[t]he NPD Report excerpts are portions of a ‘market report’ and are therefore admissible as an exception to hearsay.” *Id.*

As a general matter, documents are authenticated by evidence “sufficient to support a finding that the item is what the proponent claims it is.” Fed. R. Evid. 901(a). Authenticity is, therefore, not an especially high hurdle for a party in a civil action to overcome. *See United States v. Patterson*, 277 F.3d 709, 713 (4th Cir. 2002); *see also United States v. Ceballos*, 789 F.3d 607, 617–18 (5th Cir. 2015) (noting “low” burden for authentication); *United States v. Isiwela*, 635 F.3d 196, 200 (5th Cir. 2011) (noting flaws in authentication go to weight not admissibility). Here, we determine that Patent Owner has established adequately that the NPD Reports referenced in Paragraphs 6–8 are authentic. *See* Ex. 2035 ¶¶ 1–3. Thus, we deny Petitioner’s Motion to Exclude Paragraphs 6–8 under Federal Rule of Evidence 901(a).

As for Petitioner’s hearsay objection, we agree with Petitioner that these reports are hearsay and do not qualify as “Market Reports and Similar Commercial Publications” under Federal Rule of Evidence 803(17), as Patent Owner contends. “Rule 803(17) is a narrow exception to the hearsay rule, which applies by its terms to ‘[m]arket quotations, lists, directories, or other compilations that are generally relied on by the public or by persons in particular occupations.’” *Bianco v. Globus Med., Inc.*, No. 2:12-CV-00147-WCB, 2014 WL 119285, at *1 (E.D. Tex. Jan. 12, 2014) (Bryson, J.). In *Bianco*, the court explained that “courts have generally taken a similarly narrow view of the scope of Rule 803(17), applying it to compilations of data, not to narrative and potentially subjective assessments in either general or specialized publications.” *Id.* The NPD Reports are similar to those that were excluded in *Bianco*. Just as with the reports in *Bianco*, the NPD Reports “contain some objective information,”—i.e., the number of units

sold, but they also “contain a substantial amount of subjective analysis”—the position of Bunch O Balloons in various toy market segments, which are defined by NPD. *See id.* at *2; *see also JIPC Mgmt., Inc. v. Incredible Pizza Co.*, No. CV 08-04310 MMM (PLAx), 2009 WL 8591607, at *24 (C.D. Cal. July 14, 2009) (addressing admissibility of certain “sponsor reports,” which document the amount of exposure achieved by sponsors during a televised event and explaining that Rule 803(17) applies to “objective compilations of easily ascertainable facts,” not reports containing “conclusions reached after analysis by a specialized marketing company.”). Accordingly, Petitioner’s Motion to Exclude Paragraphs 6–8 of the Mowbray Declaration, as inadmissible hearsay, is granted.

4. *Byrne Declaration*

Petitioner seeks to exclude the entirety of the Byrne Declaration under Fed. R. Evid. 702, because Petitioner contends that Mr. Byrne’s testimony is not the “product of reliable principles and methods.” Mot. Exclude 7–8; Mot. Reply 4–5. Petitioner argues that it Mr. Byrne was unfamiliar with the concept of commercial success in the context of patent law, and did not understand the term “relevant market.” Mot. Exclude 8. Petitioner argues that this failure requires the exclusion of all of the Byrne Declaration. We disagree. Instead, we agree with Patent Owner, Opp. 10–11, that Mr. Byrne has sufficient relevant experience in the toy industry to provide helpful testimony regarding the commercial success of the Bunch O Balloons. As for Petitioner’s complaint about Mr. Byrne’s lack of familiarity with patent law or the term “relevant market,” we disagree with Petitioner that the case law requires a single prescribed methodology for determining “commercial success” for the obviousness analysis or use of particular terms in the

testimony. Here, we determine that Mr. Byrne’s testimony sufficiently explains his methodology and approach for determining the commercial success to allow for it to be evaluated. Moreover, contrary to Petitioner’s contention, we agree with Patent Owner that Mr. Byrne’s testimony itself provides sufficient indications that he did consider the relevant markets for the Bunch O Balloons, and the Bunch O Balloons success in those markets. *See* Ex. 2025 ¶¶ 17, 18, 49. To the extent that the reasoning provided by Mr. Byrne is insufficient or faulty, Petitioner’s arguments go more to the weight that should be given the testimony than its admissibility. *See Microfinacial, Inc. v. Premier Holidays Int’l*, 385 F.3d 72, 81 (1st Cir. 2004) (“When the factual underpinning of an expert’s opinion is weak, it is a matter affecting the weight and credibility of the testimony—a question to be resolved by the [factfinder].”). Thus, we deny Petitioner’s request to exclude the entirety of the Byrne Declaration.

Petitioner further argues that “[i]f the entirety of Mr. Byrne’s declaration is not excluded, then paragraphs 22, 34, 35, 37, 38, 52, 54, and 55–58 should be excluded under FRE 402, 702, 802, and/or 901.” Mot. Exclude 8. First, with respect to Paragraphs 37 and 38 of the Byrne Declaration, Petitioner submits that this testimony is based on Paragraphs 5–8 of the Mowbray Declaration, which are hearsay, so Mr. Byrne’s corresponding testimony should also be excluded. Mot. Exclude 8–9; Mot. Reply 4–5. Rule 703 allows a testifying expert to rely on materials, including inadmissible hearsay, in forming the basis of his opinion. Fed. R. Evid. 703. Although an expert may rely upon inadmissible hearsay, the expert “must form his own opinions by applying his extensive experience and a reliable methodology to the inadmissible materials. Otherwise, the

expert is simply repeating hearsay evidence without applying any expertise whatsoever, a practice that allows the [party] to circumvent the rules prohibiting hearsay.” *United States v. Mejia*, 545 F.3d 179, 197 (2d Cir. 2008) (quotation marks and internal citations omitted). Here, we determine that although Mr. Byrne’s testimony is sparse, Mr. Byrne is applying his lengthy experience in the toy industry in assessing the information Ms. Mowbray provides. Thus, although Ms. Mowbray’s testimony is inadmissible hearsay, we will not exclude Paragraphs 37 and 38. However, although we allow Mr. Byrne to provide the testimony as an explanation of the basis of his opinion, Ms. Mowbray’s testimony itself is not admissible to establish the truth of the matter it asserts. *See Paddack v. Dave Christensen, Inc.*, 745 F.2d 1254, 1262–63 (9th Cir. 1984). Any frailties in Mr. Byrne’s reasoning, or the underlying evidence, in this regard goes to the weight, and not its admissibility.

As for Paragraphs 55–58, Petitioner seeks to exclude those paragraphs as irrelevant under Fed. R. Evid. 402. Mot. Exclude 9. Petitioner argues that, in those paragraphs, Mr. Byrne identified awards received for the Bunch O Balloons product, and asserts that these awards demonstrate commercial success. Mot. Exclude 9; Mot. Reply 4. Petitioner contends, however, that awards are not a proper basis for finding commercial success. *Id.* We disagree with Petitioner that the evidence that can be considered, in determining whether there is showing of commercial success, is so narrowly limited. The cases cited by Petitioner merely establish that commercial success is “usually” shown by significant sales in a relevant market. *See Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1311–12 (Fed. Cir. 2006). Moreover, as *Ormco* explains, the sales must be deemed “significant,” but

the cases do limit the “significant” inquiry to only particular evidence. *Id.* Evidence is relevant if it has *any tendency* to make a fact more or less probable than it would be without the evidence and the fact is of consequence in determining the action. Fed. R. Evid. 401 (emphasis added). Here, Mr. Byrne testified that awards in the toy industry are considered recognition that a particular toy enjoys commercial success in that industry. *See* Ex. 2025 ¶ 55 (noting that “Spielwarenmesse is the largest toy fair in the world, and its awards indicate a significant recognition of commercial success recognized by the industry.”). Thus, we agree with Patent Owner that this evidence would be, at the very least, relevant, under the very low standard of Fed. R. Evid. 401, to determining whether ZURU’s sales are “significant.” *See United States v. Whittington*, 455 F.3d 736, 739 (6th Cir. 2006) (“[T]he district court correctly noted that the relevance threshold is very low under Rule 401.”) (internal quotation marks omitted).

Petitioner also argues that Paragraphs 22, 34, 35, 52, and 54 of the Byrne Declaration under Fed. R. Evid. 702 as unsupported by facts or data. Mot. Exclude 9–11. With respect to Paragraph 22, Petitioner argues that this testimony is only supported by Ex. 2053, which Petitioner contends includes products other than the Bunch O Balloons, and a biased statement by ZURU. *Id.* at 9–10. We disagree that Paragraph 22 should be excluded under Fed. R. Evid. 702. The alleged flaws in Exhibit 2053 and the statements that Mr. Byrne relied upon go to weight the testimony should be accorded, and not its admissibility.

As for Paragraphs 34, 35, and 52, Petitioner argues that this testimony relies upon the NPD Reports, which Petitioner contends are “unreliable.” Mot. Exclude 10; Mot. Reply 4. We disagree that the NPD Reports have

been shown to be sufficiently unreliable to warrant the wholesale exclusion of this testimony. As Mr. Byrne explains, these reports are among the types of materials relied on in the industry in assessing the commercial success of a particular toy product. Petitioner's alleged faults in these reports go to the weight that the testimony based upon them should be given, not the admissibility of that testimony. Paragraph 52 discusses the market share of Bunch O Balloons in Water/Sand Toys & Accessories Subclass, which is defined by NPD. Petitioner additionally argues this testimony should be excluded because it is "rooted in Mr. Byrne's lack of knowledge combined with unreliable data provided in the NPD report." Mot. Exclude 10; Mot. Reply 4. Specifically, Petitioner argues that Mr. Byrne's lack of knowledge is apparent because he did not know the meaning of the term "relevant market," and because he admitted that there are products in the Water/Sand Toys & Accessories Subclass that do not compete with Bunch O Balloons. Mot. Exclude 10. To begin with, we disagree that Mr. Byrne lacks sufficient knowledge about relevant markets to offer testimony. As evidenced by Mr. Byrne's testimony, we determine that he has sufficient knowledge about markets within the toy industry to be helpful to us as the trier of fact. *See, e.g.,* Ex. 2025 ¶ 49. As for Petitioner's contentions regarding the Water/Sand Toys & Accessories Subclass, Petitioner fails to explain how the potential over-inclusiveness of the category matters when Bunch O Balloons is still the top of the entire category. If anything, over-inclusiveness would increase the likelihood of understating Bunch O Balloons success. In any event, any discrepancies in the category would go to the weight to be given the evidence, not its admissibility.

With respect to Paragraph 54 of the Byrne Declaration, Petitioner argues that Mr. Byrne gave inconsistent testimony at his deposition, so this testimony should be excluded. Mot. Exclude 11. We disagree. Inconsistent testimony on cross examination is not a basis for exclusion. Such inconsistencies go to the weight the testimony should be given not its admissibility. *See Cook v. Rockwell Int'l Corp.*, 580 F. Supp. 2d 1071, 1085 (D. Colo. 2006) (gaps or inconsistencies in an expert's testimony concern the weight of the evidence and not its admissibility); *Voilas v. Gen. Motors Co.*, 73 F. Supp. 2d 452, 461 (D.N.J. 1999) (“Indeed, federal courts have generally found that the perceived flaws in an expert's testimony often should be treated as matters properly to be tested in the crucible of the adversarial system, not as the basis for truncating that process.”).

Accordingly, we deny Petitioner's Motion to Exclude the Bryne Declaration.

5. *Brown Declaration*

Petitioner moves to exclude Paragraph 3 of the Brown Declaration and Exhibit A (the NPD Reports) under Fed R. Evid. 602, 701, or 802, or all of them. Mot. Exclude 11–12; Mot. Reply 5. Patent Owner argues that the NPD Reports are admissible under Fed. R. Evid. 803(17). Opp. 14–15. As we explained above in our discussion of the Mowbray Declaration, the NPD Reports are hearsay, and do not qualify for the exception “Market Reports” contained in Fed. R. Evid. 803(17). *See supra* pp. 43–45. Thus, for the reasons explained above, we grant Petitioner's motion to exclude Exhibit A of the Brown Declaration.

As for Paragraph 3 of the Brown Declaration, Ms. Brown is offering her own testimony that “[a]ccording to NPD's U.S. Toys Retail Tracking

Service, ZURU's Bunch O Balloons item was the number one selling toy (in the Outdoor & Sports Toys Supercategory) in Dollars and Units in the United States for the year 2016." Ex. 2035 ¶ 3. Although this testimony overlaps with some of the information in the NPD Reports, and appears to be based on the same source of information, Ms. Brown's testimony is its own evidence and is not hearsay. It is not an out-of-court statement. Thus, Fed. R. Evid. 802 is not a basis for excluding her testimony.

As for Petitioner's objection under Fed. R. Evid. 602—"Need for Personal Knowledge"—we find that Ms. Brown's testimony provides sufficient basis for demonstrating that she has personal knowledge about the matters she is testifying. Ms. Brown testifies that she is "the Executive Director of Business Development," and that her conclusion about the market share of Bunch O Balloons is based on NPD's U.S. Toy Retail Tracking Service. Ex. 2035 ¶¶ 1, 3. Petitioner did not depose her, and did not probe her statements further. Without anything to contradict it, we find her testimony in Paragraphs 1 and 3 is sufficient evidence to establish her personal knowledge about the matters she is testifying upon. Thus, we deny Petitioner's Motion to Exclude Paragraph 3 of the Brown Declaration based on Fed. R. Evid. 602.

Finally, Petitioner's objection under Fed. R. Evid. 701 has no merit. Ms. Brown is not offering any opinion testimony, but is instead testifying as to her knowledge of what data collected was collected by NPD. Thus, we deny Petitioner's Motion to Exclude based on Fed. R. Evid. 701.

III. CONCLUSION

For the foregoing reasons, we determine that Petitioner has failed to establish by a preponderance of the evidence that claims 1–3 are indefinite

under 35 U.S.C. § 112, or unpatentable as obvious under 35 U.S.C. § 103 over the combinations of Cooper, Saggio, and Donaldson.

IV. ORDER

Accordingly, it is:

ORDERED that Petitioner has not shown by a preponderance of the evidence that claims 1–3 of the '282 patent are indefinite under 35 U.S.C. § 112(b) or unpatentable as obvious under 35 U.S.C. § 103;

FURTHER ORDERED that Petitioner's Motion to Exclude is GRANTED-IN-PART as to Exhibit 2052, paragraphs 5–8 of Exhibit 2024, and Exhibit A of the Brown Declaration (Ex. 2035), and DENIED otherwise; and

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

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