

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PRIME TIME TOYS LLC, PRIME TIME TOYS LTD.,
and EASEBON SERVICES LTD.,
Petitioner,

v.

SPIN MASTER, INC.,
Patent Owner.

IPR2023-01461
Patent 8,596,255 B2

Before HYUN J. JUNG, NEIL T. POWELL, and BRENT M. DOUGAL,
Administrative Patent Judges.

JUNG, *Administrative Patent Judge.*

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. *Background and Summary*

Prime Time Toys LLC, Prime Time Toys Ltd., and Easebon Services Ltd. (collectively “Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting institution of an *inter partes* review of claims 1, 2, 13, and 15–20 of U.S. Patent No. 8,596,255 B2 (Ex. 1001, “the ’255 patent”). Spin Master, Inc. (“Patent Owner”) filed a Preliminary Response. Paper 8 (“Prelim. Resp.”).

Under 35 U.S.C. § 314, an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Upon consideration of the Petition in view of the Preliminary Response and for the reasons explained below, we determine that Petitioner has not shown a reasonable likelihood of prevailing with respect to at least one of the challenged claims.

Thus, we do not institute an *inter partes* review of claims 1, 2, 13, and 15–20 of the ’255 patent.

B. *Real Parties in Interest*

Petitioner identifies Prime Time Toys LLC, Prime Time Toys Ltd., and Easebon Services Ltd. as real parties in interest. Pet. 8. Patent Owner identifies Spin Master, Inc. and Hasbro, Inc. as real parties in interest. Paper 6, 2.

C. *Related Matters*

The ’255 patent issued from a continuation-in-part of an application that is now U.S. Patent No. 8,371,282 (Ex. 1025, “the ’282 patent”). Ex. 1001, code (63); *see also* Pet. 3 (noting the ’282 patent). U.S. Patent No. 8,640,683 (“the ’683 patent”) issued from a divisional of the application that is now the ’282 patent. *See* Pet. 9 (identifying the ’683 patent).

The parties identify that the '282 and '683 patents are subject to an action in the United States International Trade Commission: *In the Matter of Certain Soft Projectile Launching Devices, Components Thereof, Ammunition, and Products Containing Same*, Investigation No. 337-TA-1325 (ITC) ("ITC proceeding"). Pet. 9; Paper 6, 2. The parties also identify that the '282 and '683 patents have also been involved in district court litigation and *inter partes* reviews, most of which are no longer pending. Pet. 9–10; Paper 6, 2–3.

The '282 patent is challenged in IPR2023-01348, and the '683 patent is challenged in IPR2023-01339. Pet. 9–10; Paper 6, 2–3.

D. The '255 Patent (Ex. 1001)

The '255 patent issued on December 3, 2013 from an application filed on December 20, 2010 that is a continuation-in-part of an application filed on May 10, 2010. Ex. 1001, codes (22), (45), (63), 1:7–10.

The '255 patent describes that using a super absorbent polymer ("SAP") as ammunition in projectile launching devices to provide advantages compared to projectiles that were previously known, such as paint balls, plastics (e.g., as found in "airsoft" guns), and foams (e.g., as found in NERF® guns). Ex. 1001, 1:23–2:3, 3:18–28, 3:59–62, 4:62–5:34. For example, certain SAP projectiles have beneficial characteristics, in part because SAPs break down at different pressures based on their composition. *Id.* at 5:12–13. Hydrated SAP projectiles can be made to have sufficient cross-linking density such that they are projected from a projectile launching device without breaking apart. *Id.* at 3:26–28, 5:2–5. At the same time, because hydrated SAP projectiles rupture when subjected to excessive pressure, such as when impacting a target after being launched from a projectile launcher, the force at impact is spread over a much wider surface

area, thus reducing the likelihood of injury when the target is a person. *Id.* at 3:59–62, 5:8–11.

E. Illustrative Claim

The '255 patent includes 20 claims, of which Petitioner challenges claims 1, 2, 13, and 15–20. Of the challenged claims, claims 1 and 13 are independent and reproduced below is claim 1.

1. A device for projecting a soft-projectile made from a super absorbent polymer, the device comprising:
 - a feed chamber including a plurality of soft-projectiles having the same shape, each soft-projectile being formed from a hydrated super absorbent polymer, wherein the device is adapted to load a soft-projectile from the feed chamber to a firing position;
 - a firing mechanism operatively arranged to accelerate the soft-projectile made from a super absorbent polymer, from the firing position, down a barrel; and
 - a safety mechanism obstructing an end of the barrel and designed to prevent access to the interior of the barrel but allow a soft-projectile accelerated by the firing mechanism to exit the barrel.

Ex. 1001, 18:22–35.

Independent claim 13 recites the same preamble and includes the same feed chamber and firing mechanism limitations but does not recite the safety mechanism limitation. *Compare* Ex. 1001, 18:22–35, *with id.* at 19:7–16; *see also* Pet. 1 (stating that “Independent Claim 13 includes the same limitations as Claim 1, except Claim 13 does not require the safety mechanism”).

F. Asserted Prior Art and Proffered Testimonial Evidence

Petitioner identifies the following references as prior art in the asserted grounds of unpatentability:

Name	Reference	Exhibit
Moorhouse	US 4,834,059, issued May 30, 1989	1006
Peev	BG 110343, published July 31, 2009	1003 ¹
Spitballs	ThinkGeek Spitballs Internet Archive Webpage, Nov. 30, 2009	1002 ²

Petitioner contends that Peev and Spitballs are prior art under § 102(a) and that Moorhouse is prior art under § 102(b).³ Pet. 12, 16. Petitioner also provides a Declaration of Mr. Joel Delman (Ex. 1016) and Dr. Maureen E. Reitman, Sc.D., F.S.P.E., P.E. (Ex. 1017).

G. Asserted Grounds

Petitioner asserts that claims 1, 2, 13, and 15–20 are unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
13, 15–20	103(a)	Peev, Spitballs
1, 2	103(a)	Peev, Spitballs, Moorhouse

Pet. 16.

¹ Includes an English language translation. Ex. 1003, 22–41.

² Exhibit 1002 includes a declaration from the Records Request Processor at the Internet Archive (Ex. 1002, 1–2), as well as multiple copies of the Spitballs webpage and related category pages (*id.* at 5–28).

³ The relevant sections of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (Sept. 16, 2011), took effect on March 16, 2013. Because the ’255 patent issued from an application filed before that date, our citations to 35 U.S.C. §§ 102 and 103 in this Decision are to their pre-AIA versions. *See also* Pet. 12 (noting that “[t]he earliest date of invention claimed [in the ITC proceeding] was February 21, 2010”).

II. ANALYSIS

A. *Legal Standards*

Petitioner bears the burden to demonstrate unpatentability. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). At this preliminary stage, we determine whether the information presented in the Petition shows a reasonable likelihood that Petitioner would prevail in establishing that at least one of the challenged claims would have been anticipated or obvious over the prior art. *See* 35 U.S.C. § 314(a).

A claim is unpatentable as obvious under 35 U.S.C. 103(a) if “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (quoting 35 U.S.C. § 103(a)). We resolve the question of obviousness based on underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the prior art and the claims; (3) the level of skill in the art; and (4) when in evidence, objective indicia of obviousness or nonobviousness. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

We apply these principles to the Petition’s challenges.

B. *Level of Ordinary Skill in the Art*

We review the grounds of unpatentability in view of the understanding of a person of ordinary skill in the art at the time of the invention. *Id.* at 13, 17. In assessing the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and

educational level of active workers in the field.” *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citing *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962–63 (Fed. Cir. 1986)).

Petitioner does not expressly present a position as to the level of skill in the art. Pet. 21–23. Rather, Petitioner identifies three positions laid out in the ITC proceeding. *Id.* (citing Ex. 1015 (Order No. 28: Construing Certain Terms of the Asserted Claims (*Markman* Claim Construction)), 7–8).

Petitioner states that “[t]he three definitions are similar,” and the Administrative Law Judge (“ALJ”) in the ITC proceeding determined that: “Any differences among the definitions will have little, if any, effect on the claim construction analysis. Thus, all of the proposals are appropriate” *Id.* at 22–23 (citing Ex. 1015, 8).

Patent Owner does not address the level of skill in the art. *See generally* Prelim. Resp.

We agree that the three definitions are similar. We further do not see either party advocating for any particular definition, or that any distinction between the definitions is material to institution. As such, we do not repeat all three definitions and accept Patent Owner’s definition as most closely fitting the legal requirements:

a bachelor’s degree in mechanical engineering, industrial design, or equivalent, with at least one year of relevant experience designing projectile launching systems but would also be a member of a team, which would include a person with a bachelor’s in materials science, chemistry, or equivalent (e.g., chemical engineering), or has at least one year experience working with materials for use in consumer products

equivalent work experience may substitute for educational experience, and vice versa

Pet. 21–22 (quoting Ex. 1015, 7–8); *see also* Ex. 1016 ¶ 55 (stating that “Patent Owner’s and Petitioner’s definitions of the [person of ordinary skill in the art] are similar, and my opinions in this Declaration would not change if I used Patent Owner’s definition of the [person of ordinary skill in the art] rather than Petitioner’s definition”).

C. Claim Construction

In an *inter partes* review, the claims are construed

using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b) (2023); *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

Petitioner identifies that the ALJ in the ITC proceeding construed two terms consistent with the plain and ordinary meaning. Pet. 23. The ALJ construed “super absorbent polymer,” recited by claim 1 of the ’282 patent and claim 1 of the ’683 patent, to mean “polymer that can absorb an extremely large amount of liquid relative to its own mass.” *Id.* (citing Ex. 1015, 14). Claims 1, 2, and 13 of the ’255 patent also recite “super absorbent polymer.” Ex. 1001, 18:23, 18:26, 18:30, 18:37, 19:8, 19:11, 19:15.

The ALJ also construed “a firing mechanism that directly applies a force to the ammunition” to mean exactly what it says. Pet. 23 (citing Ex. 1015, 23). Claim 18 of the ’255 patent similarly recites “the firing mechanism applies a force directly to the soft-projectile.” Ex. 1001, 20:10–11.

Neither Petitioner nor Patent Owner advocate for the construction of any particular claim term. Pet. 23; *see generally* Prelim. Resp.

We determine that no terms require express construction to determine whether Petitioner would prevail in establishing that at least one of the challenged claims would have been anticipated or obvious over the prior art. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. Asserted Obviousness Based on Peev and Spitballs

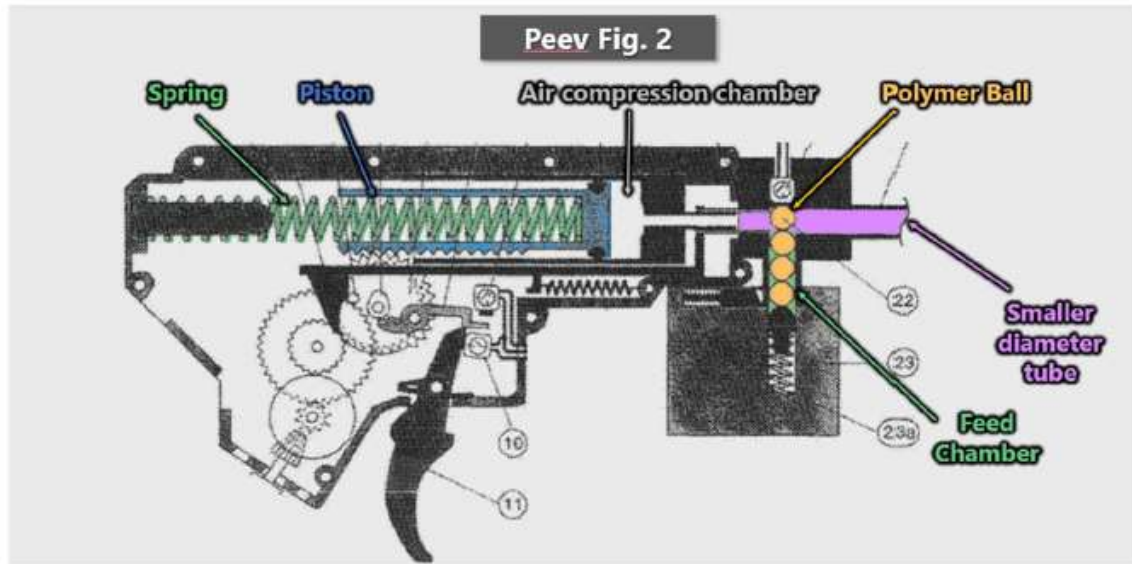
Petitioner argues that the combination of Peev and Spitballs would have rendered obvious claims 13 and 15–20. Pet. 34–48. Patent Owner responds that Petitioner provides insufficient reason to combine Peev and Spitballs. Prelim. Resp. 1, 7–20.

For the reasons below, we determine that Petitioner has not established a reasonable likelihood of succeeding in showing that claims 13 and 15–20 are unpatentable over the combination of Peev and Spitballs.

1. Independent Claim 13

a) Individual Elements

Petitioner argues that “Peev teaches a device for projecting a plurality of projectiles having the same shape, namely, spherical” and the recited “feed chamber.” Pet. 40–41 (citing Ex. 1003, 23, 31–32, 39; Ex. 1016 ¶ 82). Petitioner also provides a marked-up version of Peev’s Figure 2, reproduced below, for support. *Id.* at 41.



Peev's Figure 2, as marked-up by Petitioner shows a cross-section of an electric airsoft gun, with labels added highlighting a spring, piston, air compression chamber, feed chamber, smaller diameter tube, and polymer ball. Pet. 41; Ex. 1003, 29.

Petitioner also argues that "Spitballs discloses a *plurality* of soft spherical projectiles." Pet. 41 (citing Ex. 1002, 21). Petitioner contends that images in Spitballs show dehydrated and hydrated SAP spheres that "are a plurality of small, clear beads having a substantially spherical shape" and that are "*soft*-projectiles." *Id.* at 41 (citing Ex. 1002, 18, 21; Ex. 1016 ¶ 83), 42 (citing Ex. 1002, 21; Ex. 1016 ¶ 84). Petitioner reproduces the below picture from Spitballs. *Id.* at 42.



The above picture from Spitballs shows the product packaging with the balls in a small state in the packaging and the balls presumably in a larger state outside of the packaging. The packaging also states “Fun to Throw!,” “Grows 200x Their Size!,” and “They Slip, Slide, Bounce & Explode!”

Patent Owner does not contest any of the teachings of Peev or Spitballs. *See generally* Prelim. Resp.

b) Reason to Combine

Petitioner argues that it would have been obvious to combine Peev and Spitballs because of the risk of injury with hard plastic ammunition used in airsoft guns such as Peev. Pet. 34–40. For example, Petitioner cites a news article as stating that hard plastic rounds in airsoft guns can “crack the skin” and “cause minor bleeding.” *Id.* at 34 (quoting Ex. 1005, 3). Petitioner

discusses another news article cited by Patent Owner’s declarant in the ITC proceeding that stated the risk of injury is understood to be largely based on the muzzle velocity and that at below 350 feet per second (“fps”) the risk “is generally considered capable of only **limited harm**.” *Id.* at 35–36 (quoting Ex. 1020, 3). Petitioner also discusses yet another news article cited by Patent Owner’s declarant in the ITC proceeding that indicates injury to the eye can occur at 130 fps. *Id.* at 35 (quoting Ex. 1019, 9).

Petitioner presents cross-examination testimony of Patent Owner’s declarant, from the ITC proceeding, that injury can occur at a muzzle velocity below 350 fps. Pet. 36–37 (citing Ex. 1004 (transcripts from Evidentiary Hearings from the ITC proceeding), 441:14–442:18).^{4, 5} Petitioner also presents cross-examination testimony of Patent Owner’s declarant that making a projectile softer can decrease the chance of injury. *Id.* at 37 (citing Ex. 1004, 439:25–440:9).

Petitioner argues that “Spitballs were softer projectiles . . . that could be used in place of the hard spherical plastic ammunition.” Pet. 37 (citing Ex. 1002, 21; Ex. 1016 ¶ 76). Petitioner also argues that Patent Owner’s declarant in the ITC proceeding admitted Spitballs would have been understood to teach that “Spitballs break apart when they hit a target.” *Id.* at 37–38 (citing Ex. 1004, 387:3–15, 400:13–15). Petitioner further argues that

⁴ Petitioner repeatedly cites the transcripts of the Evidentiary Hearings from the ITC proceeding (Ex. 1004). *See, e.g.*, Pet. 35–39. Those citations provide a more fully developed record in the present case than in the typical *inter partes* review, as the underlying issues presented herein are substantively the same as in the ITC proceeding and those issues have been considered in reaching the Initial Determination (Ex. 2007).

⁵ We cite to the exhibit page numbers at the bottom right corner of each page.

“SAPs had a significant advantage in that SAPs were known to be easily adjustable” and that Patent Owner’s declarant in the ITC proceeding admitted it was “known how to make a SAP projectile (like Spit Balls) that is **spherical and soft, and would fit inside a airsoft** gun as of 2010.” *Id.* at 38 (citing Ex. 1004, 437:21–438:12; Ex. 1016 ¶ 77; Ex. 1017 ¶¶ 36–39, 46–48). Petitioner additionally argues that “replacing hard plastic projectiles in an airsoft gun with soft SAP projectiles” and “modify airsoft guns to launch soft SAP projectiles in place of hard plastic spheres” were within ordinary skill in the art, as admitted by Patent Owner’s declarant. *Id.* at 38–39 (citing Ex. 1004, 440:15–23; Ex. 1016 ¶ 78).

Petitioner, thus, contends that one of ordinary skill in the art

(1) knew about the injury problem caused by airsoft guns (such as Peev), (2) knew one solution was to make the ammunition softer, (3) knew that there was prior art soft SAP ammunition available (Spit Balls) and few other alternatives, and (4) had the technical skill to combine this soft ammunition with Peev.

Pet. 39; *see also id.* at 34 (quoting “[w]hen there is a design need or market pressure to **solve a problem** and there are a **finite number of identified, predictable solutions**, a person of ordinary skill has good reason to **pursue the known options within his or her technical grasp**” from *KSR*, 550 U.S. at 421), 38 (arguing “[t]here was a finite number of ammunition options that a [person of ordinary skill in the art] could have considered that would have a reasonable expectation of success, including rubber, cork, foam, and soft plastics, such as SAPs”).

According to Petitioner, one of ordinary skill in the art “would also have been motivated to combine Peev with Spitballs,” and “Peev and Spitballs are in the same field of endeavor, namely, launchers and ammunition use for fun.” Pet. 39–40 (citing Ex. 1016 ¶ 80); *see also id.* at

42–43 (arguing that one of ordinary skill in the art “would have been motivated to use the plurality of soft projectiles having the same spherical shape (Spitballs) in place of the plurality of hard projectiles of Peev having the same spherical shape”) (citing Ex. 1016 ¶ 85; Ex. 1017 ¶ 49).

Petitioner further argues that one of ordinary skill in the art

would have recognized combining air guns, such as Peev’s toy gun with Spitballs’ hydrated SAP projectiles, is a simple substitution of one known element (spherical hydrated SAP soft-projectiles) for another known element (Peev’s spherical hard bullets) to obtain predictable results (a safer air gun that preserves the fun of the gun).

Pet. 40 (citing Ex. 1016 ¶ 81).

c) Preliminary Response

Patent Owner responds that the injury risk is not a design problem with airsoft guns, but rather that airsoft guns are designed to replicate real guns. Prelim. Resp. 7, 8–9 (citing Ex. 1004, 364:22–365:4, 366:20–25; Ex. 1005, 3, 23, 26; Ex. 1016 ¶ 75). Patent Owner argues that one of ordinary skill in the art “would not have been concerned with reducing the injury risk associated with being shot by the hard plastic ammunition,” as indicated by both parties’ testimony in the ITC proceeding. *Id.* at 9 (citing Ex. 1004, 229:15–17, 231:11–232:15, 439:10–15).

Patent Owner also argues that “[i]n an effort to mimic real firearms, many airsoft guns are specifically designed to fire hard ammunition at high speeds” and that “is a feature, not a bug, because ‘[t]he intent is to be like a real gun.’” Prelim. Resp. 10 (citing Ex. 1004, 366:23–367:15). In Patent Owner’s view, “if the design goal was to create a projectile launcher without injury risk, a skilled artisan would not have started with an airsoft gun like

Peev's," as determined in the ITC proceeding. *Id.* (citing Ex. 2007 (Initial Determination from the ITC proceeding), 71).⁶

Patent Owner also responds that Petitioner fails to establish that SAP ammunition would have reduced injury risk associated with Peev's airsoft gun. Prelim. Resp. 10–11 (citing Pet. 4, 40, 48). Patent Owner argues that "the Petition identifies injuries such as 'penetration of skin and bone' that do not apply universally to all airsoft guns" because such injuries occur at or above 300–400 fps. *Id.* at 11 (citing Pet. 35–36). Patent Owner also argues that both sides' declarants agreed that "some airsoft guns have much lower velocities." *Id.* (citing Ex. 1004, 213:21–214:10, 372:7–8).

If Peev's airsoft gun is viewed as a toy, Patent Owner argues that "it would fall into the low-powered category of such devices" that have "muzzle velocity 'that's half, or less than half, of the velocity that breaks the skin.'" Prelim. Resp. 12 (citing Ex. 1004, 368:7–14, 370:2–7; Ex. 2007, 73 n.34). Patent Owner, therefore, argues that "Peev's airsoft gun—to the extent it is a 'toy,' as Petitioner would have it—lacks a skin-breakage problem." *Id.* (citing Ex. 1004, 369:18–370:1; Ex. 2007, 72–73).

Patent Owner argues that Petitioner knew that the "skin-breakage" issue undermines its reason to combine and mischaracterized the testimony of Patent Owner's declarant to support its position. Prelim. Resp. 12–13 (citing Pet. 36–37). According to Patent Owner, the cited testimony "is limited to the context of a report by Petitioner's Mr. Delman showing injuries associated with muzzle velocities in the 350 fps range" and "gave no indication of whether bruises or welts would occur under 350 fps." *Id.* at 13

⁶ Like Patent Owner, we cite to the exhibit page number at the very bottom center of each page.

(citing Ex. 1004, 368:7–16, 532:24–533:13). Patent Owner also argues that its declarant in the ITC proceeding “could not say that bruising or welts are impossible,” “had not seen any evidence one way or the other,” and “did not address those types of injuries.” *Id.* at 14 (citing Pet. 36–37; Ex. 1004, 441:14–16).

Patent Owner further argue that “statements that minor injuries like bruising and welts might possibly occur at ‘a muzzle velocity below 350 feet per second,’ (Pet. 36–37), do not mean these types of injuries would occur at the drastically lower velocity (e.g., 160 fps) of a youth-focused airsoft gun,” and “[n]o evidence to that effect exists on this record, not even in Mr. Delman’s declaration.” Prelim. Resp. 14 (citing Ex. 1016 ¶¶ 75–81; Ex. 2007, 74).

Regarding Petitioner’s asserted “damage to the human eye,” Patent Owner argues that “[t]he record is devoid of any evidence that soft SAP ammunition would prevent eye injuries.” Prelim. Resp. 14 (citing Ex. 1016 ¶¶ 75–81). Patent Owner also argues that Petitioner’s declarant “admitted that the answer to preventing eye injuries with airsoft guns—regardless of ammunition type—is protective eyewear.” *Id.* at 14–15 (citing Ex. 1004, 214:14–23, 216:20–218:8; Ex. 2007, 72).

According to Patent Owner’s summary, Petitioner’s deficiencies are that “using soft SAP ammunition would ‘destroy the basic purpose of [a high-powered, adult] airsoft gun,’” there is “no evidence that a youth-focused (or ‘toy’) airsoft gun would cause skin breakage or even lesser body injuries to someone who is shot,” and there is “no evidence that SAP ammunition would prevent eye injuries to someone who is shot,” as determined in the ITC proceeding. Prelim. Resp. 15–16 (citing Ex. 2007, 74–76, 77).

Patent Owner further responds that SAP ammunition was not an identified solution. Prelim. Resp. 7–8, 16 (citing Pet. 37–38), 18. According to Patent Owner, “Petitioner lacks record evidence that soft polymer spheres like those described in Spitballs were used in the prior art as ammunition for any type of projectile launcher that even remotely resembles Peev’s electric airsoft gun” and there is no support that “‘soft plastics, such as SAPs’ were known ammunition options.” *Id.* at 16–17 (citing Pet. 38). Patent Owner argues that supporting testimony “merely parrots back the same conclusory sentence from the Petition without corroboration” and only states that one of ordinary skill in the art “‘**could have** considered,’ (EX1016 ¶ 77), SAPs as an ammunition option for an airsoft gun.” *Id.* at 17.

Patent Owner also argues that Spitballs “instructs users to ‘throw,’ ‘chuck,’ . . . ‘fl[i]ng,’” and “blow[] the Spit Balls polymer products through a tube,” but Spitballs “does not teach or suggest using the Spit Balls polymer products as ammunition for a gun-like launcher analogous to Peev’s airsoft gun.” Prelim. Resp. 17–18 (citing Ex. 1002, 15, 18) (second alteration in original). According to Patent Owner, “Petitioner does not argue otherwise.” *Id.* at 18.

Turning to alternative motivation theories, Patent Owner responds that merely arguing that references are in the same field of endeavor is insufficient to explain why the references would have been combined. Prelim. Resp. 18–19 (citing Pet. 39–40). Patent Owner also argues that Spitballs and Peev are not in the same field of endeavor, as determined in the ITC proceeding. *Id.* at 19 (citing Ex. 1002, 15; Ex. 1003, 26; Ex. 2007, 71). Patent Owner further argues that Petitioner’s “one-sentence” argument that the proposed combination represents a simple substitution of known

elements presents insufficient evidence that “ammunition for an airsoft gun was an ‘established function’ of a polymer product like the one in Spitballs.” *Id.* at 20 (citing Pet. 40).

d) Petitioner Fails to Show a Reasonable Likelihood of Prevailing

We agree with Patent Owner that insufficient evidence supports Petitioner’s reason to combine Peev and Spitballs. Prelim. Resp. 20. Though there is a risk of injury while using airsoft guns, Petitioner has not established that one of ordinary skill in the art would consider this risk a problem with airsoft guns, as opposed to an accepted function. *Id.* at 8–10.

Petitioner’s own declarant, Mr. Delman, testified that he regularly modifies “toy projectile launchers, including for example Nerf blasters” to make them more powerful to “improve the firing qualities – power and accuracy” for use by his sons. Ex. 1016 ¶ 20. Petitioner’s declarant, like Peev, is also concerned with making toy guns more like a real gun.

Apart from toy guns, Mr. Delman testified that he “own[s] approximately 30 airguns” which “utilize BBs, pellets, and airsoft ammunition.” Ex. 1016 ¶ 19. Mr. Delman’s cross-examination testimony (noted by “A.”) from the ITC proceeding is reproduced below, where he testified that the risk of injury from airguns, with regard to his children, is not something that he is concerned with:

Q. . . . you were playing with these airguns with your sons as they were growing up, correct?

A. Yes.

. . .

Q. Well, but you were worried about your sons’ safety, right?

A. To be honest, I wasn’t worried about it, no. I’ve never been worried about it, because, to me, one of the benefits of learning

to target shoot and handle airguns is the discipline of safety and handling them properly and knowing not to aim them at each other, et cetera, not to do dangerous things with them or to use them in dangerous ways.

So I was always very comfortable with my boys playing with these toys because I have taught them to play with them in a safe manner.

Ex. 1004, 231:8–25. Mr. Delman further testified that even though his sons shot at each other with airguns, he trusted that they would use them safely and was not concerned about their safety, or the risk of injury. *Id.* at 232:1–15.

We also agree with Patent Owner that Petitioner has not established that the combination of Peev and Spitballs decreases the risk of injury. Prelim. Resp. 10–16. First, though Petitioner cites the risk of eye injury as one of the dangers, Petitioner’s declarant testifies that he “believe[s] that most any projectile launched at somebody else can pose a risk of an eye injury.” Ex. 1004, 216:22–23. He further testifies that certain of the accused products in the ITC proceeding, that are guns that launch SAP ammunition, pose the risk of eye injury or include warnings about the risk of eye injury. *Id.* at 216:16–218:8. Thus, contrary to Petitioner’s position, the record establishes that risk of eye injury is still present with the use of SAP ammunition in a projectile launcher.

Secondly, it is not clear what other risk of injury is present in the airsoft gun of Peev. Petitioner calls Peev’s airsoft gun a toy (Pet. 40 (“air guns, such as Peev’s toy gun”)) and on cross-examination Petitioner’s declarant testified that Peev operates similar to another “toy” airsoft gun with a muzzle velocity of 160 fps (Ex. 1004, 213:21–214:10; *see also* Prelim. Resp. 11). Petitioner does not establish the typical muzzle velocity

of “toy” airsoft guns, such as Peev. *See* Pet. 24–26 (summarizing Peev), 34–38 (describing injuries associated with airsoft guns). Petitioner does not establish the risk of injury that is present in Peev or in airsoft guns similar to Peev. *See id.* at 24–26, 34–38.

As previously discussed, the record evidence shows that the risk of injury to the skin is understood to occur in airguns with a muzzle velocity above 350 fps. Pet. 35–36 (citing Ex. 1004, 433:18–16; Ex. 1019, 9; Ex. 1020, 3). Below that muzzle velocity, Petitioner points to Patent Owner’s declarant who testified that there is merely a chance of injury. *Id.* at 36–37 (quoting Ex. 1004, 441:14–442:18). Petitioner does not assert that the airsoft gun of Peev has a particular muzzle velocity. *See* Pet. 34–38; Ex. 1016 ¶¶ 56–62, 75–81. Petitioner does not present evidence as to the difference in injury risk that using a SAP projectile would make in Peev’s “toy” airsoft gun. *See* Pet. 34–40; Ex. 1016 ¶¶ 56–62, 75–81. For example, if “toy” airsoft guns similar to Peev have muzzle velocities around 160 fps, the evidence shows that the risk of injury is low. Ex. 1004, 441:14–442:18; Ex. 1019, 9; Ex. 1020, 3. It is unclear what further difference moving to a softer ammunition would make as there is no evidence cited in the Petition on this point. Pet. 34–40; Ex. 1016 ¶¶ 56–62, 75–81. Similarly, there is no evidence cited in the Petition that a SAP shot from Peev’s airsoft gun at a muzzle velocity of 350 fps would *not* cause injury or would *appreciably* decrease the chance of injury. Pet. 34–40; Ex. 1016 ¶¶ 56–62, 75–81; *see also* Ex. 2007, 74–77 (determining that “Respondents did not argue there was any skin breakage/injury at that speed,” “Respondents presented no evidence that Clear Spheres/Spit Balls’ teachings would be any ‘safer’ at that speed,” “it is not clear whether one of ordinary skill would have focused on **softer ammunition** as the solution,” and “[n]one of the cited articles or

reports teach or suggest that using an alternative, softer ammunition would alleviate safety concerns with airsoft guns”).

For the reasons above, Petitioner presents insufficient evidence that one of ordinary skill in the art would consider the injury risk associated with Peev’s airsoft gun a problem, that the use of SAP would decrease the risk of injury, and that the muzzle velocity of Peev’s airsoft gun is sufficient to cause injury. *See* Pet. 34–39. The arguments in the Petition substantially repeat the relevant testimonial evidence that does not cite to any additional evidence in the record. *Compare id.* at 34–40, *with* Ex. 1016 ¶¶ 75–79; *see also id.* ¶¶ 56–72 (opining on Peev’s and Spitballs’s disclosures). Therefore, insufficient evidence supports Petitioner’s asserted reason to combine Peev and Spitballs.

We further agree with Patent Owner that merely arguing that references are in the same field of endeavor is insufficient to explain why the references would have been combined. Pet. 39–40; Prelim. Resp. 18–19; Ex. 1016 ¶ 80. We additionally agree with Patent Owner that insufficient evidence supports Petitioner’s argument that the proposed combination represents a simple substitution of known elements. Pet. 40; Prelim. Resp. 20; Ex. 1016 ¶ 81. As discussed above, insufficient evidence supports Petitioner’s assertion that spherical hydrated SAP was a known ammunition for airsoft guns like Peev’s, that is an “element . . . known in the field” (*KSR*, 550 U.S. at 416).

For all of these reasons, and after our review of Petitioner’s assertions and the supporting evidence, we determine that Petitioner has not established a reasonable likelihood of prevailing in showing that claim 13 is obvious in view of Peev and Spitballs.

2. *Dependent Claims 15–20*

Claims 15–20 each depend directly from claim 13 and recite further limitations regarding the feed chamber, diameter of the soft-projectiles, use of air pressure for launching the soft-projectiles, the firing mechanism, and the device being a toy or in the shape of a gun. Ex. 1001, 20:4–16.

Petitioner argues with citations to the record that the combination of Peev and Spitballs would have rendered obvious claims 15–20. Pet. 45–48. Petitioner’s arguments for these claims do not address the deficiencies discussed regarding the asserted reason to combine.

Having determined that Petitioner has not met its burden for institution with respect to claim 13, Petitioner likewise has not met its burden with respect to dependent claims 15–20.

E. Asserted Obviousness Based on Peev, Spitballs, and Moorhouse

1. *Independent Claim 1*

a) *Individual Elements*

For the preamble of claim 1, Petitioner argues with reference to contentions for claim 13 that “Peev teaches a device for projecting a plurality of projectiles having the same shape, namely, spherical” that “also includes a feed chamber which holds a plurality of these projectiles,” and “[t]he projectiles of Spitballs are also of the same shape and are soft.” Pet. 49–50 (citing Ex. 1016 ¶¶ 105–106). For “each soft-projectile being formed from a hydrated super absorbent polymer,” Petitioner argues that “Spitballs teaches soft-projectiles formed from a hydrated super absorbent polymer.” *Id.* at 50 (citing Ex. 1016 ¶ 107).

For “wherein the device is adapted to load a soft-projectile from the feed chamber to a firing position” and “a firing mechanism operatively arranged to accelerate the soft-projectile made from a super absorbent

polymer, from the firing position, down a barrel,” Petitioner contends that Peev teaches those limitations. Pet. 50–51 (citing Ex. 1004, 529:21–530:12, 532:15–23; Ex. 1016 ¶¶ 76–81, 108–110). Petitioner relies on Moorhouse for teaching “a safety mechanism obstructing an end of the barrel and designed to prevent access to the interior of the barrel but allow a soft-projectile accelerated by the firing mechanism to exit the barrel.” *Id.* at 51–52 (citing Ex. 1006, 2:14–26, 13:51–14:6, Figs. 4–6, 12, 20, 21; Ex. 1016 ¶ 111).

b) Asserted Reason to Combine

Petitioner argues that “[t]he motivation to combine Peev and Spitballs is discussed above and includes reducing the risk of injury and the fact that Peev and Spitballs are in the same field of endeavor, namely, projectile launchers and ammunition used for fun.” Pet. 49.

According to Petitioner, one of ordinary skill in the art “seeking to reduce the risk of injuries would be motivated to use one or more of the safety features described in Moorhouse.” Pet. 49 (citing Ex. 1006, 1:10–65; Ex. 1016 ¶ 104). Petitioner similarly argues in its mapping of the limitations to the references that it would have been obvious “to utilize the safety mechanism of Moorhouse in the device of Peev to reduce the risk of injury and for the other reasons provided above” regarding the asserted motivation to combine. *Id.* at 52 (citing Ex. 1016 ¶¶ 112, 113).

c) Petitioner Fails to Show a Reasonable Likelihood of Prevailing

Petitioner asserts the same reason to combine Peev and Spitballs for claim 1 that it asserted for independent claim 13 (Pet. 49), and as discussed above for claim 13, Petitioner’s reason to combine is insufficient.

Petitioner, therefore, fails to show a reasonable likelihood of prevailing in its challenge to claim 1 based on Peev, Spitballs, and Moorhouse.

2. Dependent Claim 2

Petitioner argues that Peev discloses claim 2's limitation "wherein the feed chamber is a removable magazine." Pet. 52–53 (citing Ex. 1003, 34; Ex. 1016 ¶¶ 114, 115).

Petitioner's arguments for claim 2 does not address the deficiencies discussed above regarding the asserted reason to combine. Petitioner, thus, also fails to a show reasonable likelihood of prevailing in its challenge to claim 2.

III. CONCLUSION

After considering the evidence and arguments presented in the Petition and the cited evidence, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing in proving that at least one of claims 1, 2, 13, and 15–20 of the '255 patent is unpatentable.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is denied, and no *inter partes* review is instituted.

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