Trials@uspto.gov
571-272-7822

Paper 10
Date: February 12, 2024

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.

IPR2023-01339
Patent 8,640,683 B2

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

DOUGAL, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background and Summary

Petitioner, Prime Time Toys LLC, Prime Time Toys LTD., and Easebon Services LTD, requests that we institute an *inter partes* review challenging the patentability of claims 4–9, 12, and 14[1] (the "challenged claims") of U.S. Patent 8,640,683 B2 (Ex. 1001, "the '683 patent"). Paper 2 ("Pet."). Patent Owner, Spin Master, Inc. (through its exclusive licensee, Hasbro Inc. (Paper 4, 2)), argues that Petitioner's request is deficient and should not be granted. Paper 6 ("Preliminary Response" or "Prelim. Resp."). Petitioner also filed a Preliminary Reply (Paper 7, "Prelim. Reply"), and Patent Owner filed a Preliminary Sur-reply (Paper 8, "Prelim. Sur-reply").

Applying the standard set forth in 35 U.S.C. § 314(a), which requires demonstration of a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim, we deny the Petition.

B. Related Matters

The parties identify that the '683 patent is 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. 7; Paper 4, 2. The parties also identify that the '683 patent has also been involved in district court litigation and *inter partes* reviews which are no longer pending. Pet. 8; Paper 4, 2.

C. The '683 Patent

The '683 patent is entitled, "Soft-Projectile Launching Device," and is directed to a projectile launching device with ammunition made from super

[1] Claims 1–3 and 10–11 have been disclaimed. Ex. 2014.

absorbent polymer ("SAP"). Ex. 1001, code (54), 1:12–16. SAPs are polymers that can absorb an extremely large amount of water relative to their own mass. *Id.* at 3:46–53.

The '683 patent describes using SAPs 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). *Id.* at 1:20–67, 3:58–4:3. For example, certain SAP projectiles have beneficial characteristics, in part because SAPs break down at different pressures based on their composition. *Id.* at 4:4–18. 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 4:19–21. 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 3:67–4:3, 4:21–24.

D. Illustrative Claim

All of the challenged claims depend from claim 1, reproduced below:

> 1. A projectile launching system, comprising:
>
> ammunition comprising a plurality of substantially spherical soft-projectiles formed from hydrated super absorbent polymer; and
>
> a projectile launcher for launching the ammunition in free flight.

Ex. 1001, 9:39–43 (paragraphing added).

E. Evidence

Petitioner's grounds of unpatentability rely on the following evidence:

Name	Non-Patent Document	Exhibit
Spitballs	ThinkGeek Spitballs Internet Archive Webpage, Nov. 30, 2009	1002, 17–22[2]

Name	Patent Document	Exhibit
Peev	Bulgarian Patent No. BG110343 (July 31, 2009)	1003[3]

F. Asserted Grounds

Petitioner asserts the following grounds of unpatentability (Pet. 15), supported by the declarations of Joel Delman (Ex. 1016) and Dr. Mauren T.F. Reitman (Ex. 1017):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
4–9, 12, and 14[4]	103(a)[5]	Peev, Spitballs

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

[2] Exhibit 1002 includes a declaration from the Records Request Processor at the Internet Archive, as well as multiple copies of the Spitballs webpage and related category pages. Petitioner clarifies that it defines the prior art reference "Spitballs" as pages 17–22. Pet. 13–14.
[3] Includes an English language translation.
[4] Claims 1–3 and 10–11 have been disclaimed. Ex. 2014.
[5] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 285–88 (2011), revised 35 U.S.C. § 103 effective March 16, 2013. We refer to the pre-AIA version of § 103.

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 (POSA). *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. 19–20. Rather, Petitioner identifies three positions laid out in the ITC proceeding. *Id.* (citing Ex. 1015, 7–8). Petitioner states that "[t]he

three definitions are similar," and the Administrative Law Judge 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 20 (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. 19 (quoting Ex. 1015, 8).

C. Claim Construction

In *inter partes* review, we construe claims 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).

Petitioner identifies that the ALJ in the ITC proceeding construed two terms consistent with the plain and ordinary meaning. Pet. 20–21. The ALJ construed "super absorbent polymer" in claim 1 to mean "polymer that can absorb an extremely large amount of liquid relative to its own mass." *Id.* (citing Ex. 1015, 14). The ALJ construed "a firing mechanism that directly applies a force to the ammunition" in claim 14 to mean exactly what it says. *Id.* at 21 (citing Ex. 1015, 23).

Neither Petitioner or Patent Owner advocate for the construction of any particular claim term. Pet. 20–21; *see generally* Prelim. Resp.

We determine that no terms require express construction at this stage. *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))).

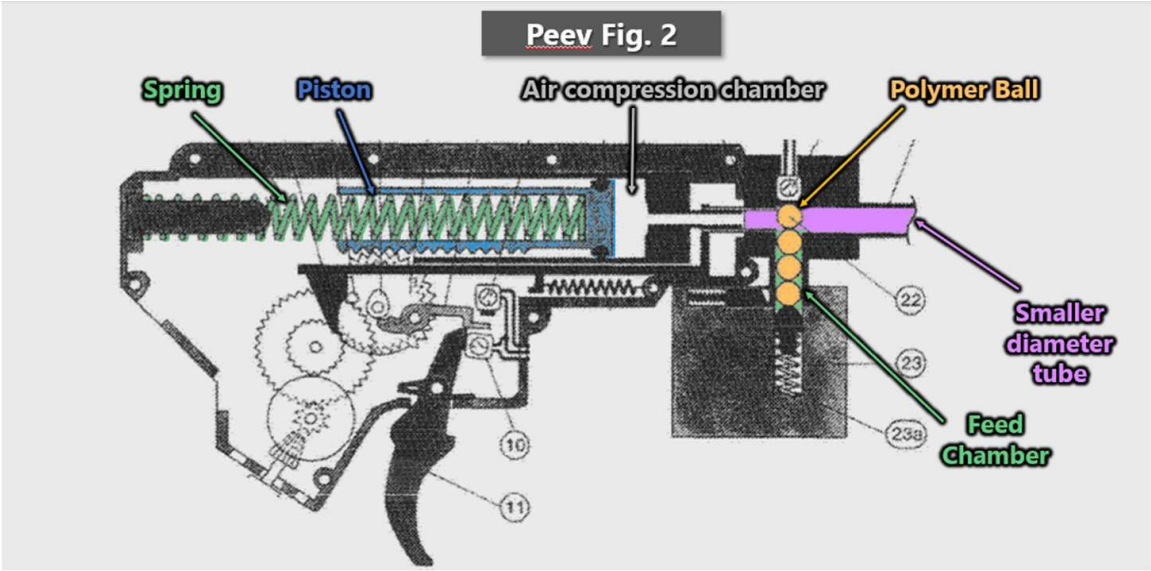
D. 35 U.S.C. § 103(a) – Peev, Spitballs

Petitioner argues that the combination of Peev and Spitballs renders obvious claims 4–9, 12, and 14. Pet. 35–56. Patent Owner disagrees. Prelim. Resp. 26–40. As previously noted, claims 1–3, 10, and 11 have been disclaimed. Ex. 2014. As all of the challenged claims depend from claim 1 and require the structure of claim 1. In our analysis below, we determine that Petitioner has not established a reasonable likelihood of succeeding in showing that claim 1 is unpatentable over the combination of Peev and Spitballs.

1. Claim 1 – Individual Elements

As required by claim 1, Petitioner argues that Peev teaches "A projectile launching system, comprising: ammunition comprising a plurality

of substantially spherical []-projectiles . . . ; and a projectile launcher for launching the ammunition in free flight." Pet. 42, 44 (citing Ex. 1003, 23, 31–32, 38–40, Fig. 2; Ex. 1016 ¶¶ 91, 94–95). Petitioner also provides a marked-up version of Peev Figure 2, reproduced below, for support. Pet. 42.



Peev 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. 42; Ex. 1003, 29.

As further required by claim 1, Petitioner argues that Spitballs teaches "ammunition comprising a plurality of substantially spherical soft-projectiles formed from hydrated super absorbent polymer." Pet. 42–43 (citing Ex. 1002, 18, 21; Ex. 1016 ¶ 92). Petitioner reproduces the below picture from Spitballs. *Id.* at 43.

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 at this stage. *See generally*, Prelim. Resp.

2. Claim 1 – 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. 35–42. 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 36 (quoting Ex. 1005, 3). Petitioner presents another news article stating that 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 37 (quoting Ex. 1020, 3). However, Petitioner also presents evidence that injury to the eye can occur at 130 fps. *Id.* at 36–37 (citing 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. *Id.* at 37–38 (citing Ex. 1004, 533:14–534:18).[6] Petitioner also presents cross-examination testimony of Patent Owner's declarant that making a projectile softer can decrease the chance of injury. *Id.* at 38–39 (citing Ex. 1004, 531:25–532:9). Petitioner's declarant testifies that "Spitballs were softer projectiles." Ex. 1016 ¶ 85.

Thus, Petitioner concludes that:

> A POSITA 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. 41–42 (citing Ex. 1016 ¶ 90).

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. 28. Patent Owner quotes evidence, proffered by

[6] The record in the present case is more fully developed than in the typical *inter partes* review, as the issues presented herein are largely repeated from the ITC proceeding. *See e.g.*, Ex. 1004 (transcript of the hearing in the ITC proceeding).

Petitioner, as stating "[airsoft guns] look and behave exactly [l]ike real guns so that it feels like you're firing a real gun." *Id.* (quoting Ex. 1005, 3). Peev similarly states that "Electronic airsoft guns represent a copy of real firearms" and that "[t]he task of the invention [of Peev] is to create an electric airsoft [that is] . . . as close as possible to the way of functioning and manipulation of the real firearm." Ex. 1003, 23, 26 (both quoted at Prelim. Resp. 28).

We agree with Patent Owner. Though there is a risk of injury while using airsoft guns, Petitioner has not established that one of skill in the art would consider this risk a problem with airsoft guns, as opposed to an accepted function. Prelim. Resp. 27–30. 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. Thus, 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." *Id.* ¶ 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 further agree with Patent Owner that Petitioner has not established that the combination of Peev and Spitballs decreases the risk of injury. Prelim. Resp. 30–36. 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. 41) 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. 31). Petitioner does not establish the

typical muzzle velocity of "toy" airsoft guns, such as Peev. Petitioner does not establish the risk of injury that is present in Peev or in airsoft guns similar to Peev.

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. 36–37. Below that muzzle velocity, Petitioner points to Patent Owner's declarant who testified that there is merely a chance of injury. *Id.* at 37–38. Petitioner does not assert that the airsoft gun of Peev has a particular muzzle velocity. 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. 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. 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. 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.

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 1 is obvious in view of Peev and Spitballs.

3. Claims 4–9, 12, 14

Petitioner argues that the combination of Peev and Spitballs renders obvious claims 4–9, 12, and 14. Pet. 45–53, 55–56. Patent Owner does not address the dependent claims. Having determined that Petitioner has not met its burden for institution with respect to claim 1, the Petition likewise has not met its burden with respect to the dependent claims.

III. CONCLUSION

For the foregoing reasons, we do not institute trial.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), no *inter partes* review as to any claim of U.S. Patent 8,640,683 B2 is instituted.

For PETITIONER:

Kenneth George
Brian Comack
AMSTER, ROTHSTEIN & EBENSTEIN LLP
kgeorge@arelaw.com
bcomack@arelaw.com

For PATENT OWNER:

Kenneth Darby
Linhong Zhang
FISH & RICHARDSON P.C.
kdarby@fr.com
lwzhang@fr.com

Jennifer Bailey
ERISE IP, P.A.
jennifer.bailey@eriseip.com