

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CHOIROCK CONTENTS FACTORY CO., LTD.,
Petitioner,

v.

SPIN MASTER LTD.,
Patent Owner.

IPR2019-00900
Patent 9,868,073 B2

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

POWELL, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

Choirock Contents Factory Co., Ltd. (“Petitioner” or “Choirock”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–20 of U.S. Patent No. 9,868,073 B2 (Ex. 1001, “the ’073 patent”). Concurrently with the Petition, Petitioner filed a Motion for Joinder to Related *Inter Partes* Review of U.S. Patent No. 9,868,073 (*Mattel, Inc. v. Spin Master Ltd.*, IPR2018-01673) under 35 U.S.C. § 315(c) and 37 C.F.R. § 42.122(b). Paper 3. Spin Master Ltd. (“Patent Owner”) filed a Preliminary Response. Paper 14 (“Prelim. Resp.”). Patent Owner also filed an Opposition to Petitioner’s Motion for Joinder with IPR2018-01673. Paper 7. Petitioner thereafter filed a Reply to Patent Owner’s Opposition. Paper 8. With our authorization, Petitioner further filed a Reply to Patent Owner’s Preliminary Response. Paper 16 (“Pet. Reply to Prelim. Resp.”); *see also* Paper 15 (authorizing reply). Pursuant to 35 U.S.C. § 314, we instituted an *inter partes* review of the ’073 patent and at the same time denied the Motion for Joinder. Paper 17 (“Dec.”).

After institution, Patent Owner filed a Response (Paper 31, “PO Resp.”), to which Petitioner filed a Reply (Paper 34, “Pet. Reply”). Patent Owner thereafter filed a Sur-reply (Paper 39, “PO Sur-reply”). An oral hearing in this proceeding was held on June 25, 2020; a transcript of the hearing is included in the record (Paper 45, “Tr.”).

For the reasons below, Petitioner persuades us by a preponderance of the evidence that claims 1–20 of the ’073 patent are unpatentable.

II. BACKGROUND

A. Related Matters

According to the parties, complaints alleging infringement of the ’073

patent were filed on April 24, 2018 in *Spin Master Ltd. V. Mattel, Inc.*, No. 2:18-cv-3435 (C.D. Cal.) and in *Spin Master Ltd. v. Alpha Group US LLC*, No. 2:18-cv-01046 (C.D. Cal.). Pet. 1; Paper 5, 2. The parties also indicate that, on September 7, 2018, a petition requesting *inter partes* review of the '073 patent was filed in IPR2018-01673. Pet. 2; Paper 5, 2. On March 19, 2019, *inter partes* reviews of the '073 patent and its related patents were instituted, and on April 29, 2019, joint motions to terminate those proceedings were granted. The present Petition was filed on March 29, 2019. Paper 4.

B. The Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–20 would have been unpatentable on the following grounds:

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1–20	§ 103(a) ¹	Tomiyama ² , Shannon ³
1–3, 5–8	§ 102(b)	Tomiyama
1–3, 5, 6, 8	§ 102(b)	Wilhelm ⁴

¹ The relevant sections of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (2011), took effect on March 16, 2013. The application from which the '073 patent issued is a continuation of an application filed on December 22, 2006, and the '073 patent claims priority to a foreign application filed on February 20, 2006. Ex. 1001, codes (30), (60). Because the first application and the foreign application were filed before March 16, 2013, the effective date of the relevant amendment, the pre-AIA versions of §§ 102 and 103 apply.

² Certified translation of JP 38-9155, Pub. May 15, 1963 (Ex. 1005). Patent Owner does not dispute the accuracy of the certified translation. *See generally* PO Resp.; PO Sur-reply. We treat the translation as accurate.

³ U.S. Patent No. 5,310,378, iss. May 10, 1994 (Ex. 1007).

⁴ U.S. Patent No. 6,592,427 B1, iss. July 15, 2003 (Ex. 1011).

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1–20	§ 103(a)	Aprile ⁵ , Shannon

As further support, Petitioner relies on two Declarations of Barry Kudrowitz, Ph.D. Exs. 1002, 1020. Patent Owner relies on a Declaration of Jason A. Janét, Ph.D. Ex. 2001.

C. The '073 Patent

The '073 patent describes “a toy that transforms by means of . . . a magnetic force.” Ex. 1001, 1:21–23. Figure 7 of the '073 patent is reproduced below.

Figure 7

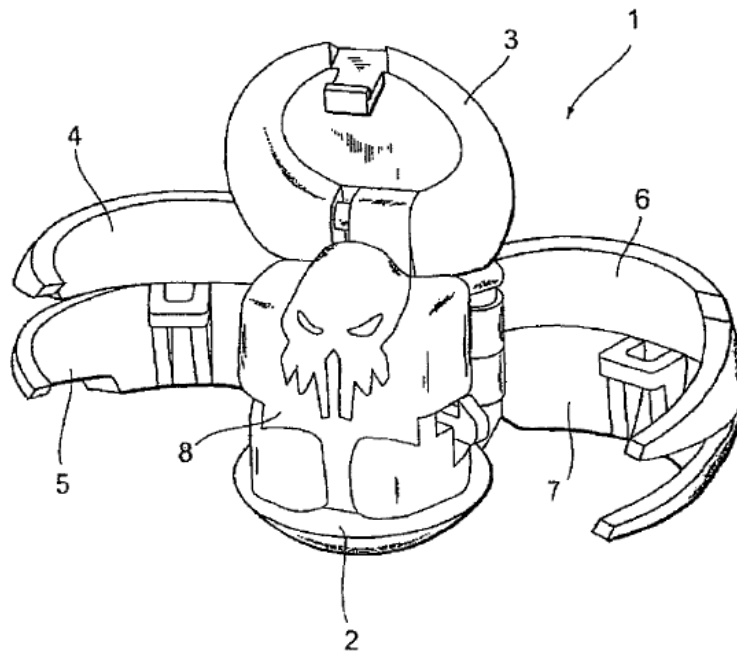


Figure 7 is a “perspective view of the toy . . . showing a post-transformation state.” *Id.* at 4:60–61. “Toy 1 . . . transforms from a rollable, spherical shape (the first shape . . .) to a fictitious character shape (a second shape . . .) . . . by means of the action of a magnetic force.” *Id.* at 5:18–23;

⁵ WO 2006/051417, pub. May 18, 2006 (Ex. 1008).

see also id. at Figs. 2–6(b) (showing pre-transformation state). The exterior of toy 1 forms the first or spherical shape, and toy 1 includes lower component 2, upper component 3, lateral components 4–7, front component 8, and back component 9. *Id.* at 5:26–39.

Within toy 1 are locking component 10, magnet 11 at the lower end of locking component 10, and spring 12 to move locking component 10 upwardly, when no magnetic force acts on toy 1. *Id.* at 5:39–43, 5:53–57, 7:14–17, Figs. 1, 5(a), 5(b). Locking component 10 includes portions that lock lateral components 5, 7, thereby locking components 3, 4, 6, 8, 9 to maintain the first or spherical shape. *Id.* at 6:15–23, 7:8–12, 7:14–22, 8:23–28. When a magnetic force acts on toy 1, locking component 10 moves downwardly, thereby causing lateral components 4–7 to move outwardly and upper component 3 to move upwardly due to springs to transform toy 1 to the second or fictional character shape. *Id.* at 6:23–28, 6:42–46, 6:52–54, 6:62–67, 7:22–28, 7:39–41, 8:29–48.

D. Illustrative Claim

Claims 1, 9, and 15 are independent. Each of claims 2–8, 10–14, and 16–20 depends, directly or indirectly from one of independent claims 1, 9, and 15. Claim 1 is illustrative of the challenged claims and recites:

1. A transformable toy comprising:
 - a first toy component including:
 - a toy body;
 - at least one auxiliary component coupled with the body and rotatable towards the body to a closed position and rotatable away from the body to an open position,
 - wherein in the closed position, the first toy component is rollable;
 - at least one auxiliary component elastic element,

- wherein the at least one auxiliary component is rotatably associated with the body via the at least one auxiliary component elastic element, such that the at least one auxiliary component elastic element biases the at least one auxiliary component to the open position away from the body;
- a locking component associated with the toy body and selectively positionable between a first, locked position wherein the at least one auxiliary component is retained in the closed position, and a second, disengaged position wherein the at least one auxiliary component is released to the open position, the locking component including a latch and a keeper engaged with the latch when the locking assembly is in the first, locked position; and
- a first magnetically-responsive member associated with the locking component; and
- a second toy component separate from the first toy component and including a second magnetically-responsive member,
- wherein at least one of the first magnetically-responsive member and the second magnetically-responsive member is a magnet,
- wherein upon the second magnetically-responsive member being brought into proximity of the first magnetically-responsive member, the latch of the locking component associated with the first magnetically responsive member moves to thereby disengage the latch from the keeper and position the locking component in the second, disengaged position.

Ex. 1001, 16:2–41.

III. ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner asserts that one of ordinary skill in the art “would have (i) a bachelor’s degree in mechanical engineering or a related field and at least three years of experience in toy design.” Pet. 12 (citing Ex. 1002 ¶¶ 22–24). Patent Owner states that its declarant applies Petitioner’s proposed level of

ordinary skill in his analysis. PO Resp. 1 (citing Ex. 2001 ¶ 31); *see also* Tr. 71:15–22 (confirming that, for purposes of this proceeding, Patent Owner is not disputing Petitioner’s proposed level of ordinary skill).

In determining 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) (citation and internal quotation marks omitted).

Based on the full record before us, we determine that one of ordinary skill in the art “would have a bachelor’s degree in mechanical engineering or a related field and at least three years of experience in toy design.” This level of skill in the art is consistent with the disclosure of the ’073 patent and the prior art of record.

B. Claim Construction

On October 11, 2018, the Office revised its rules to harmonize the Board’s claim construction standard with that used in federal district court. Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340 (Oct. 11, 2018) (amending 37 C.F.R. § 42.100(b) effective November 13, 2018) (now codified at 37 C.F.R. § 42.100(b) (2019)). This rule change applies to this proceeding. *See* Pet. 13–14 n.2 (stating that the “USPTO replaced the broadest reasonable interpretation standard with the claim construction standard that is used to construe claims during a civil action in federal district court”); Paper 4, 1 (according filing date of March 29, 2019

to the Petition); PO Resp. 1 (stating that “[t]his IPR was filed after November 13, 2018, and the *Phillips* standard applies”).

According to the applicable standard, claim terms “are generally given their ordinary and customary meaning” as understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). Extrinsic evidence is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” *Phillips*, 415 F.3d at 1317. Only those terms that are in controversy need be construed, and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs., Inc. v. America Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Our analysis below does not require construing any claim term to resolve the parties’ dispute. Accordingly, we do not expressly construe any claim term.

C. Alleged Obviousness over Tomiyama and Shannon

1. Overview of Tomiyama

Tomiyama describes a “running toy having a desired shape,” such as tank-like running toy 1. Ex. 1005 ¶¶ 1, 2. Figure 2 of Tomiyama is reproduced below.

FIG. 2

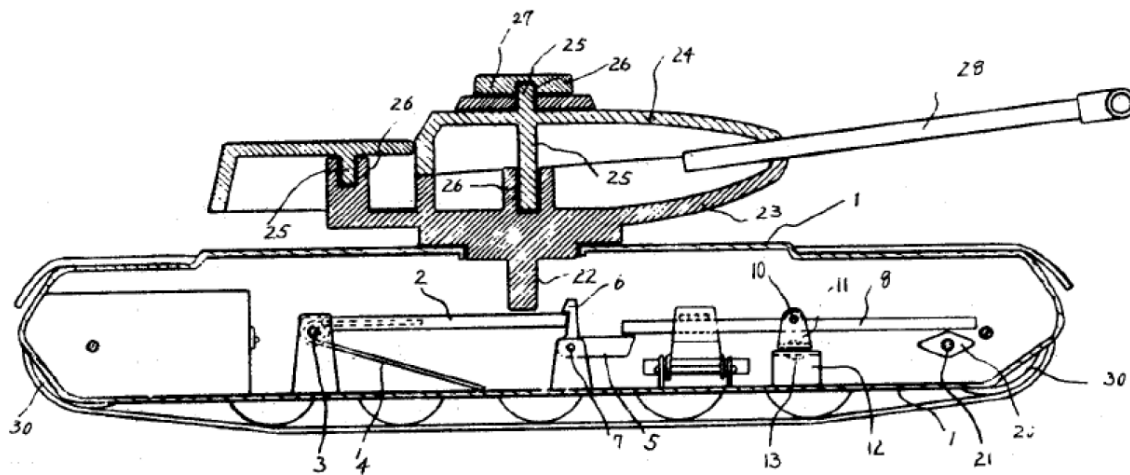
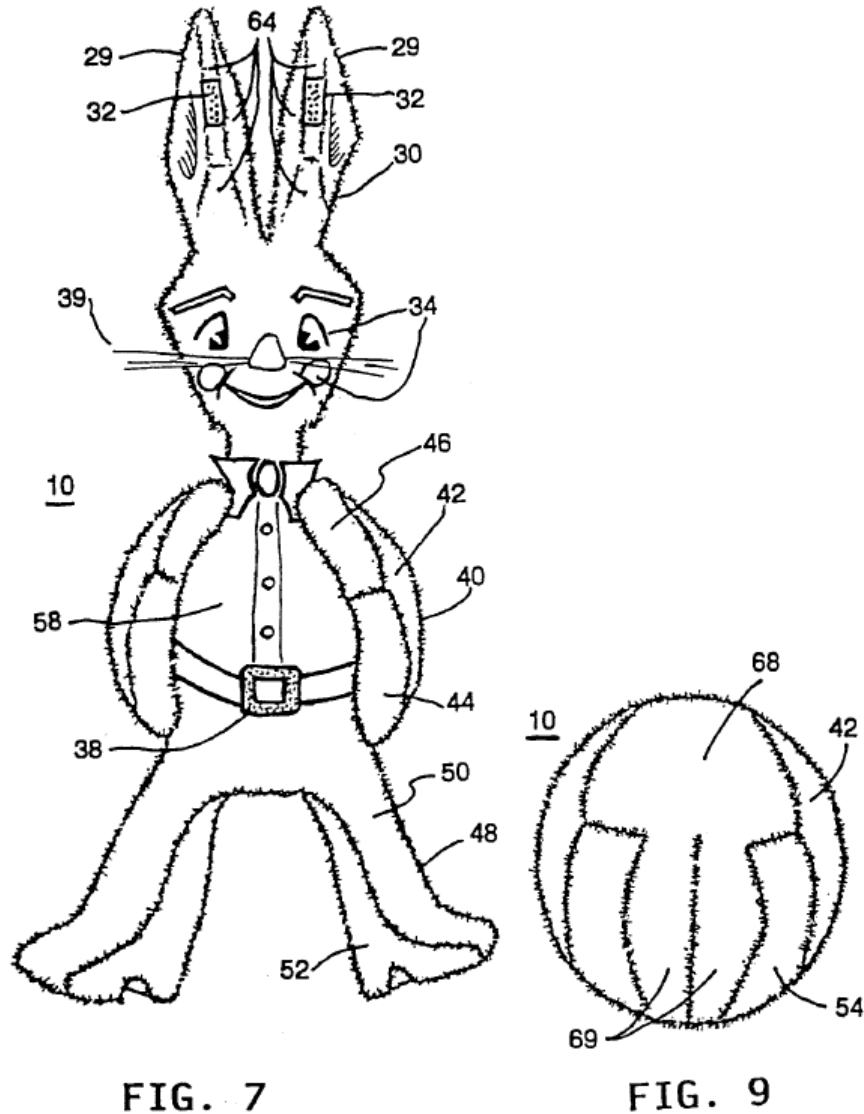


Figure 2 shows a cross-sectional view of Tomiyama's toy. *Id.* ¶¶ 4, 6, Brief Description. Toy 1 includes push-out body 2, spring 4 that urges push-out body 2 outwardly, activating body 15 with magnet 16 (shown in Figures 3 and 5), and engaging tab 6 linked to activating body 15. *Id.* ¶ 2. "Self-destructing" base 23 with protrusion 22 is loosely mounted in toy 1 so that protrusion 22 is near push-out body 2. *Id.* Other "self-destructing" components 24, 27, 28 are mounted on base 23. *Id.* The toy also includes wheel 30. *Id.* ¶ 3.

When toy 1 passes near magnet 29 made to resemble a landmine (shown in Figure 1), magnet 29 attracts magnet 16 inside toy 1, and the movement of magnet 16 causes activating body 15 to release engaging tab 6 from push-out body 2 through rotating plate 8, coil spring 14, and cam plate 20. *Id.* ¶¶ 3, 4. Spring 4 urges push-out body 2 to strike protrusion 22, which causes self-destructing base 23 and self-destructing components 24, 27, 28 to resemble the effect of a tank hitting a landmine and being destroyed. *Id.* ¶ 4. Tomiyama also states that the toy "can be a tank as shown in the drawings, or any other type of vehicle." *Id.* ¶ 6.

2. Overview of Shannon

Shannon “relates to a transformable toy.” Ex. 1007, 1:6–7. Figures 7 and 9 of Shannon are reproduced below.



Figures 7 and 9 show first and last folding steps. *Id.* at 3:39–40, 3:44–46. Rabbit toy 10 includes appendages with hinges so that the appendages can be folded and urged to unfold when released from the folded configuration. *Id.* at 5:3–6, 5:10–24. In the folded configuration, the hinged appendages conceal interior surfaces 44, 46, 50, 52, 58, 62, 64 and display only exterior

surfaces 42, 54, 68, 69. *Id.* at 6:6–30, 6:52–55. Also, fastener 32 and fastener 38 latch together and hold toy 10 closed in a ball-shaped configuration. *Id.* at 6:31–33. Fasteners 32, 38 may be hook and loop fasteners or “may be other types of fasteners including magnets, metal or plastic intermating snaps or traditional fasteners such as hook and eye or button types.” *Id.* at 5:59–65.

3. Discussion

Petitioner asserts that each of Tomiyama and Shannon teaches many of the limitations of claims 1–20. Pet. 28–57. Petitioner identifies two modifications of the references’ teachings that allegedly would have been obvious.

First, Petitioner asserts that the claims are unpatentable because it would have been obvious to modify Tomiyama’s toy so that “the toy would not have to move towards the magnet on wheels or tracks, but rather could be rolled to the magnet.” *Id.* at 25. Petitioner elaborates that it would have been obvious to modify Tomiyama’s toy to have the shape of other well-known toys, such as the shape of “the spring-loaded ball of Shannon.” *Id.* at 27. Petitioner asserts that the resulting toy would meet all of the limitations of the challenged claims. *Id.* at 28–57.

Second, Petitioner asserts that it would have been obvious to modify Shannon to use a magnetically-released fastener. *Id.* at 26. Specifically, Petitioner asserts that a person of ordinary skill in the art would understand from Tomiyama that a magnetically-released fastener constitutes an alternate fastening means for Shannon’s toy. *Id.* Petitioner asserts that the resulting toy would meet all of the limitations of the challenged claims. *Id.* at 28–57.

Petitioner asserts that a person of ordinary skill in the art would have had motivation and sufficient skill to perform either modification of the prior art. *Id.* at 23–28. Petitioner asserts that the references themselves suggest the modifications. *Id.* at 24.

Regarding the proposed modification of Tomiyama, Petitioner argues that “Tomiyama teaches that its tank . . . can take on other shapes, which would include a ball.” *Id.* at 24. Petitioner argues that Tomiyama and Shannon both teach similar transformable toys “in the same field of endeavor as the ’073 patent.” *Id.* at 23–24. Petitioner contends that a person of ordinary skill in the art would have realized the possibility of using a ball shape with Tomiyama’s basic concept of a toy travelling toward a magnet that triggers the toy to open. *Id.* at 25.

Noting that Tomiyama teaches its toy can have “a desired shape” (Ex. 1005 ¶ 1), Petitioner argues that Tomiyama indicates the possibility of beneficially using its release mechanism with other movable toy shapes. Pet. 25 (citing Ex. 1005 ¶ 1; Ex. 1002 ¶ 69). Petitioner further argues that a person of ordinary skill in the art would understand that modifying Tomiyama’s toy to roll toward its magnet would add a valuable “excitement and skill element.” *Id.* Petitioner argues that the proposed modification “represents nothing more than changing the shape of the spring-loaded tank to that of well-known toys that are rollable, such as the spring-loaded ball of Shannon.” *Id.* at 27. Petitioner asserts that a person of ordinary skill in the art would have been motivated to modify Tomiyama in such a manner “to better meet the need identified explicitly by each of the references—the need for interesting and easy-to-use transformable toys.” *Id.* Petitioner argues that the combination of the references’ teachings would provide the relative

user interest from each reference's toy "in a single, more interesting toy set without sacrificing ease of use." *Id.*

Regarding the proposed modification of Shannon, Petitioner asserts that the references suggest the modification. *Id.* at 24. Petitioner elaborates that "Shannon teaches that a variety of fasteners, which would include Tomiyama's magnetically-operated latch, can be used with its transformable ball." *Id.* Petitioner explains that a person of ordinary skill in the art "would appreciate from Shannon itself that any releasable fastener could be used to maintain the toy in its ball shape." *Id.* at 26. Petitioner also argues that "[l]ike Tomiyama, Shannon discloses a toy intended to meet a need for toys which are both intriguing, easily used, and easily transformable." *Id.* at 25. Petitioner argues that Tomiyama discloses an "interesting" effect from sending a toy toward a magnet to open the toy. *Id.* at 26 (citing Ex. 1005 ¶ 4; Ex. 1002 ¶ 71). Petitioner argues that a person of ordinary skill in the art "would be fully able to, and motivated to, apply this concept . . . to the spring loaded ball of Shannon." *Id.* Petitioner contends that

starting with Shannon, the claimed invention of the '073 Patent is obvious because it represents nothing more than the incorporation of a known magnetically-operated release being used exactly for its intended and understood purpose to allow a rollable toy such as a ball to open up into a different shape upon coming into proximity to a magnet.

Id.

As discussed in detail below in Section III.D.2, Petitioner demonstrates obviousness of claims 1–20 over Aprile and Shannon. Having found claims 1–20 unpatentable over Aprile and Shannon, we do not reach the parties' disputes regarding Petitioner's allegations of obviousness over Tomiyama and Shannon.

D. Alleged Obviousness of Claims 1–20 over Aprile and Shannon

1. Overview of Aprile

Aprile relates to a certain type of locking device. Ex. 1008, 1:4–9. Aprile shows a container with a locking device in Figure 2, which is reproduced below. *Id.* at 3:15–20.

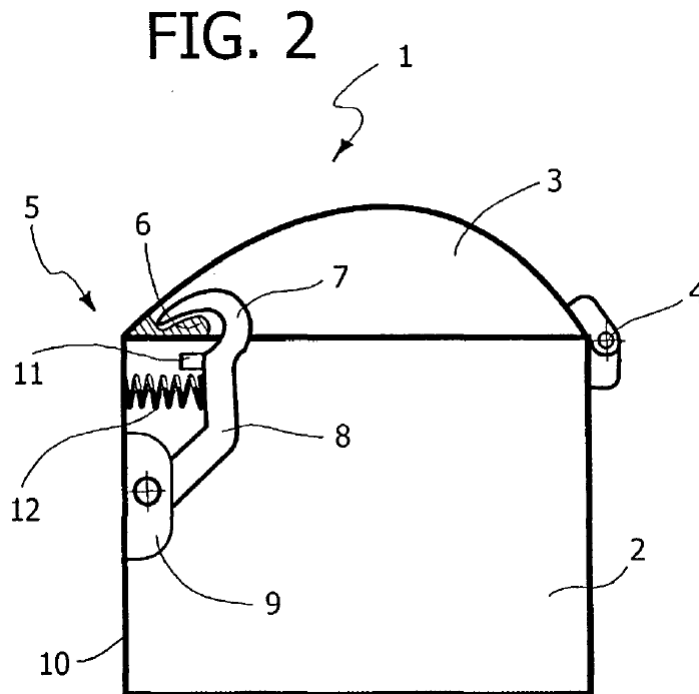


Figure 2 shows container 1 with locking device 5. *Id.* at 3:28–36. Container 1 includes bottom part 2 and lid 3 “hinged in 4 to the bottom part 2.” *Id.* at 3:29–31.

Locking device 5 includes contrast member attached to lid 3. *Id.* at 3:32–35. Locking device 5 also includes jamming member 7, which includes arm 8, and “can rotate in 9” inside container 1. *Id.* at 3:35–4:5. Jamming member 7 includes permanent magnet 11 pointed toward front wall 10. *Id.* at 4:6–7. “[S]pring 12 tends to keep the arm 8 in the position represented in Figure 2, in which said jamming member 7 is engaged with

the contrast member 6, thus keeping the lid 3 in the position of locking and preventing its opening.” *Id.* at 4:7–12.

Aprile shows locking device 5 in its open state in Figure 3, which is reproduced below.

FIG. 3_I

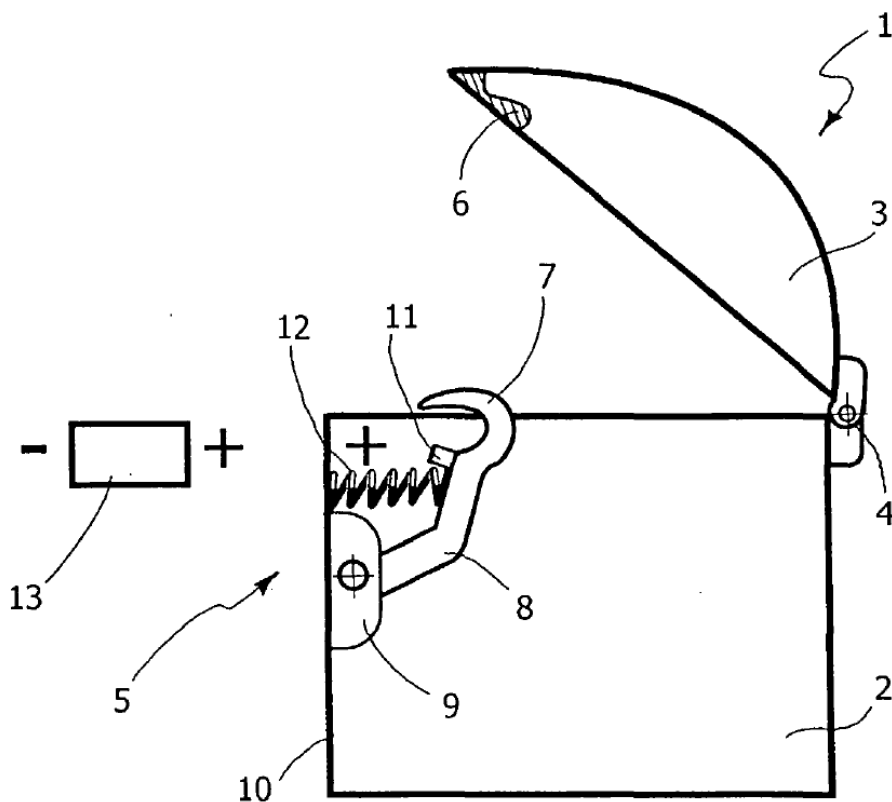


Figure 3 shows container 1 with locking device 5 in its open condition and second permanent magnet 13 facing permanent magnet 11. *Id.* at 3:21–23, 4:16–23. Aprile discloses opening locking member 5 as follows:

By approaching the pole of the second permanent magnet 13 to the corresponding pole of the permanent magnet 11 . . . a field of magnetic repulsion is produced, as a result of which the arm 8 rotates within the container 1 into the position represented in

Figure 3, against the action of the spring 12, in such a way as to disengage the jamming member 7 from the contrast member 6.

Id. at 4:19–27. This allows opening lid 3. *Id.* at 4:27–28.

Aprile also discloses including its locking device 4 in other applications. For example, in connection with Figure 4 (not shown), Aprile discloses using its locking device in a doll. *Id.* at 5:25–6:19.

2. Discussion

a. Introduction

Petitioner argues that it would have been obvious to combine Aprile's latch with Shannon's ball for substantially the same reasons that it would have been obvious to combine Tomiyama's latch with Shannon's ball. Pet. 75. Petitioner argues that Aprile teaches an "even simpler latch," and that a person of ordinary skill in the art would have been motivated to apply this latch "to a ball like Shannon." *Id.* In connection with this, Petitioner argues "Aprile explicitly teaches that its latch is useful in any application calling for extremely low cost, small dimensions, and ease of implementation." *Id.* (citing Ex. 1008, 1:26–29, 5:3–10; Ex. 1002 ¶¶ 246–256). Petitioner argues that all of these features would prove useful with a ball toy. *Id.* (citing Ex. 1002 ¶¶ 246–256). Additionally, Petitioner asserts that Shannon teaches its toy can use different fasteners. *Id.* (citing Ex. 1007, 5:59–65; Ex. 1002 ¶¶ 246–256). Thus, Petitioner contends, "the references themselves suggest the combination, which in any event is an obvious example of using known toy mechanisms for their intended, expected purposes." *Id.* at 76. Petitioner also outlines how it believes the proposed combination of the references' teachings would meet all of the limitations of the challenged claims. *Id.* at 76–85.

Petitioner argues multiple ways that it allegedly would have been obvious to modify the references. One of Petitioner's arguments is that it would have been obvious to add Aprile's magnetically released fastener to Shannon's toy. *Id.* at 75 (arguing obviousness of "using a known fastener (the magnetic latch of Aprile) exactly as intended (to cause an item to spring open when a magnet is brought near) to achieve the predicted result (the ball of Shannon will open magnetically)"). Having reviewed the full record, and for the reasons discussed in greater detail below, we find that Petitioner's arguments and evidence in support of this theory demonstrate obviousness of claims 1–20 over Aprile and Shannon by a preponderance of the evidence. Finding claims 1–20 unpatentable based on Petitioner's argument that it would have been obvious to modify Shannon's toy to use Aprile's magnetically released fastener, we do not reach Petitioner's alternate theory regarding why claims 1–20 would have been obvious over Aprile and Shannon. Petitioner's alternate theory is that modifying Aprile's container by "rounding the bottom of the toy box to form a round shape would have been obvious in light of Shannon." Pet. 77.

Patent Owner argues that it would have been unobvious to modify Shannon with a magnetically released fastener like that disclosed by Aprile. PO Resp. 22–45, 63.⁶ Patent Owner argues that Shannon teaches away from the proposed modification. *Id.* at 23–29. Patent Owner asserts that

⁶ On page 63 of the Response, Patent Owner refers back to and incorporates by reference the arguments on pages 22–45. Those arguments traverse Petitioner's assertion of obviousness over Tomiyama and Shannon, asserting that it would not have been obvious to modify Shannon to include a magnetically released fastener.

“Shannon expressly teaches its desire for the toy to be easily and simply manipulatable by a very young child and *teaches away* from any modification that requires openings or reasoned manipulation.” *Id.* at 23.

Patent Owner contends that “Shannon discourages any fastener that requires manipulation of an element drawn or stuffed through an opening.” *Id.* at 25–

26. Patent Owner argues that “Shannon also teaches away from the modification because it would present a more complex toy that is not simply and easily transformed via the child’s manipulation of the toy.” *Id.* at 26.

Patent Owner elaborates that “[v]ery young children do not have the reasoned manipulation to place the second toy component of the external magnet at a first location, move to a second location, and accurately roll the Shannon toy towards the external magnet at the first location.” *Id.* at 27.

Patent Owner also argues that the proposed modification would have created hazards for a child playing with the toy. *Id.* at 26–29. Specifically, Patent Owner contends that a child could swallow Aprile’s external magnet, and that Aprile’s fastener could snag the child’s skin or clothes. *Id.*

Patent Owner also argues that the proposed modification would change Shannon’s principle of operation. *Id.* at 29–32. According to Patent Owner, “[Petitioner’s] wholesale change of Shannon would change its principle of operation, turning it from a toy the user manipulates by peeling the appendages apart to achieve the transforming opening of the toy, to a toy the user must roll to open.” *Id.* at 29–30. Patent Owner argues that “[t]he difference between using a magnet to trigger a latch to release versus using a magnet to hold a latch closed was described *by the Board* as a ‘material difference.’” *Id.* at 30 (citing Dec. 23–24, 39).

Patent Owner argues that the proposed modification of Shannon “require substantial redesign of the Shannon toy.” *Id.* at 32. In connection with this argument, Patent Owner cites and discusses Dr. Janét’s opinions regarding certain details of multiple possible ways that one could have modified Shannon’s toy to include a magnetically released latch. *Id.* at 32–38 (citing Ex. 2001 ¶¶ 86, 88, 90, 92–94, 96, 98, 100, 101). Patent Owner argues that “the Shannon toy is formed of the thin sheet of polypropylene overmolded with rubber. Such a construction does not easily allow for including a spring-loaded locking assembly.” *Id.* at 33. Additionally, with respect to one possible implementation of the proposed modification, Patent Owner argues that “[a]t the very least, a toy designer would need to undergo undue experimentation with magnets of different sizes, strength, and cost in combination with a variety of spring options to develop magnets that could be repeatedly and predictably locked and unlocked under the operating conditions.” *Id.* at 34. Regarding a different possible implementation, Patent Owner argues that “when the magnet is on the end of the hook, there is the additional problem of a magnet on a hook that must now be cleared through the keeper/eye. Clearing the end of the hook itself would be a challenge for a very young child, but clearing the end of the hook that also carries a magnet would be a greater challenge. Additionally, the magnet on the end of the hook is exposed and could be easily torn off.” *Id.* at 35. Regarding another possible implementation, Patent Owner argues that it would be undesirable to form Shannon’s rabbit ears in one piece, asserting that

it would require a much higher degree of tolerance of the appendages of the rabbit fitting together into the spherical

configuration. A single component with details of two ears takes away from the look and feel of the overall Shannon design, with its multiple appendages the child manipulates and folds.”

Id. at 36.

Patent Owner also argues that Petitioner does not support sufficiently its assertion that a person of ordinary skill in the art would have been motivated to modify Shannon in the specific way proposed. *Id.* at 38–40. Regarding Petitioner’s position that a person of ordinary skill in the art would have been motivated by a desire to make Shannon’s toy more interesting, Patent Owner argues

Simply asserting toys desire interesting effects does not identify a motivation for changing the principle of operation. Toy designers commonly desire interesting effects and want to be fun for play—that is whole point of toy design. (Ex. 2001, ¶ 102). Therefore, general allegations of motivations to combine because the toy would be fun to play with does not provide a motivation to combine for the *specific combination* [Petitioner] advances.

Id. at 39.

Regarding Petitioner’s observation that Shannon teaches using different types of fasteners, Patent Owner argues that

A [person of ordinary skill in the art] would reasonably understand from Shannon’s short mention of magnetic fasteners that the hook and loop fasteners 32,38 shown on the rabbit ears and midsection could be replaced with magnets that are magnetically attracted together. (Ex. 2001, ¶ 98). [Petitioner] makes a significant leap in logic, based on hindsight, to transform Shannon’s toy from a single toy component transformed by peeling apart the appendages to a two-component toy assembly transformed by rolling the toy to an external magnet. It is not sufficient that the modification to Shannon *could* be made—there must be a reason *why* a [person of ordinary skill in the art] would have been motivated to make the modification.

Id. at 40. Patent Owner also faults Petitioner for asserting that a person of ordinary skill in the art would have recognized the possibility that various things “could be” done. *Id.* at 44–45.

Additionally, Patent Owner argues that Petitioner engages in improper hindsight reconstruction. *Id.* at 40–44. Patent Owner contends that “[t]he vast majority of the reasons provide for why the combination is obvious are based on hindsight.” *Id.* at 41.

Patent Owner also argues that Aprile is not “rollable.” *Id.* at 57–58. Patent Owner explains that “Dr. Janét opines the sharp corners and edges of the container would cause the container to bounce and move forward unevenly and unpredictably in a discontinuous and rough jostle as the sharp edges and corners of the container impacted the surface at different angles.” *Id.* at 57.

Additionally, Patent Owner argues that “simply rounding the bottom of [Aprile’s] toy box to form a round shape” would not have made Aprile’s container “rollable.” *Id.* at 58. Patent Owner explains that “the hinge on [Aprile’s] container would prevent the container from ‘as a whole move[] forward by rotating around an axis or point, like a ball.’” *Id.*

Patent Owner also argues that “[i]t [w]ould [n]ot [b]e [o]bvious to [m]odify Aprile’s [c]ontainer to [h]ave [m]ultiple [c]laimed [a]uxiliary [c]omponents or a [s]econd [f]igure [s]hape [t]hat [i]s a [f]ictitious [c]haracter.” *Id.* at 63. Patent Owner argues that “[m]odifying Aprile’s container to include a plurality of lids (the mapped auxiliary component) would require a lock for each lid, resulting in a heavier container with more mechanical structure (additional hinges, additional locks, etc.).” *Id.* at 64. Patent Owner argues that “[t]here is even less reason to modify the Aprile

container to have a second figure shape that is a fictitious character. The container is just that—a container that holds items.” *Id.*

Patent Owner also argues that Petitioner did not explain its proposed combinations of the references’ teachings clearly enough. PO Resp. 56.

Patent Owner explains that

In IPR2018-01673, the Board stated Spin Master’s “substantive arguments indicate that Patent Owner understands Petitioner’s proposed combination of the references the same we do.” (IPR2018-01673, Paper 7 at 36). Simply because Spin Master was forced to guess and argue against multiple possible permutations of combinations does not mean Choirock provided a proper mapping with the necessary particularity. The test for whether a mapping is sufficiently particular is not whether the Patent Owner could possibly understand it.

Id. at 56.

In its Reply, Petitioner maintains that it would have been obvious to add an externally released, magnetic latch to Shannon’s toy. Pet. Reply 10–21. Addressing Patent Owner’s reliance on Dr. Janét’s testimony alleging various problems with the proposed modification, Petitioner argues that Dr. Janét’s “opinions are inconsistent, arbitrary, and unfounded.” *Id.* at 11. Petitioner argues that Dr. Janét does not support his position that the proposed modification would transform Shannon from a toy that does not require “reasoned manipulation” to a toy that does require “reasoned manipulation.” *Id.* at 12–13. Petitioner also faults Dr. Janét’s testimony that the proposed modification would have changed the appropriate age range for Shannon’s toy. *Id.* at 13–15. Petitioner further argues that the proposed modification would not require unduly difficult manipulation for a child of the age range identified by Dr. Janét. *Id.* at 16–17. Regarding the hazards that Patent Owner alleges would stem from the proposed modification,

Petitioner asserts that a person of ordinary skill in the art would have understood how to mitigate any such hazards. *Id.* at 17–18.

Petitioner also argues that the proposed modification would not change Shannon’s principle of operation. *Id.* at 18–21. Petitioner argues that “[t]he entertainment of [Shannon’s] toy stems from transformation. Ex. 1007, Title, 6:39–40 (‘instant transformation’); 6:49 (‘dramatic [] opening’); 5:24–30 (‘enhance the transformation’); Ex. 1020, ¶ 69. Changing the fastener type would not remove the enjoyment of the toy, and thus, would not change Shannon’s principle of operation.” Pet. Reply 19.

Petitioner also disputes Patent Owner’s assertion that the proposed modification would require substantial redesign. *Id.* at 19–20. Petitioner asserts that “[a]ny particular design choice of determining a proper location, size, and shape of a magnet to implement that modification or designing the ear appendages as a single unit, are all within the knowledge of a [person of ordinary skill in the art].” *Id.* at 20.

Additionally, Petitioner disputes Patent Owner’s argument that its obviousness assertions stem from improper hindsight. *Id.* Petitioner argues that it derives its obviousness assertions from “the disclosed advantages or features in the prior art, not the claimed invention.” *Id.*

Petitioner also addresses Patent Owner’s concern about Petitioner’s statements that a person of ordinary skill in the art would have known certain things “could be” done. *Id.* at 20–21. In particular, Petitioner asserts that it “properly alleges motivation to combine, separate from the alleged ‘could be’ statements.” *Id.* at 20.

In its Sur-reply, Patent Owner argues that Petitioner has improperly deviated from the mapping presented in the Petition. PO Sur-reply 7–10. In

particular, Patent Owner asserts that Petitioner's Reply discusses "different versions of a spring biased rocker latch," and that "these designs were never disclosed by [Petitioner] until its Reply." *Id.* at 8–9.

Additionally, Patent Owner argues that Petitioner "cannot avoid Shannon's teaching of a toy that does not require reasoned manipulation." *Id.* at 10. Patent Owner elaborates that using a rocker latch in Shannon's toy would "require[] precise aligning of the latch with the catch to mate the two components while holding all spring-loaded appendages down." *Id.* at 11. Asserting that a very young child could not manipulate such a toy, Patent Owner argues the allegedly obvious toy "does not meet several stated goals in Shannon." *Id.*

Regarding Shannon's principle of operation, Patent Owner faults Petitioner for "arguing one principle of operation is not unchanged (thus, presumably indicating obviousness), while ignoring other, changed principles of operation." *Id.* at 12. Patent Owner contends that Petitioner's "argument does not fully consider all of Shannon's teachings and ignores the desire to peel apart the appendages." *Id.* at 13. Regarding the assertion that the modified toy would preserve the transformation of the toy, Patent Owner asserts that "simply maintaining one principle of operation while eradicating others does not motivate the modification." *Id.*

Patent Owner also argues that Petitioner "is incorrect that 'could be' statements may be considered in a proper obviousness analysis." *Id.* Patent Owner explains that "[t]he proper standard is still whether a [person of ordinary skill in the art] would have been motivated to make the proposed modifications." *Id.* at 14.

b. Analysis

Considering the record as a whole, Petitioner's evidence and arguments provide rational underpinning for its contentions that claims 1–20 would have been obvious in view of Aprile and Shannon. Weighing the parties' evidence and arguments, Petitioner persuades us that a person of ordinary skill in the art would have had motivation to modify Shannon's toy to have a magnetically released latch like Aprile's. Additionally, Petitioner persuades us that there would have been a reasonable expectation of success for such a modification.

Regarding the alleged motivation to combine, Petitioner persuades us that a person of ordinary skill in the art would have recognized value in modifying Shannon's toy to have a magnetically released fastener like Aprile's. Dr. Kudrowitz explains why a person of ordinary skill in the art would have recognized value in such a modification of Shannon's toy.

Ex. 1002 ¶¶ 25–36; 246–256. For example, Dr. Kudrowitz explains that

it has long been known among toy designers that magnets can be particularly appropriate for use in toys because magnetic attraction can operate over distances and through materials and cause toy components to move by unseen forces. This, too, can add to the surprise element of a toy, and result in increased play value. The Aprile reference alludes to this play benefit when it discusses how a magnet can cause a toy container to open as if “by magic.” (Ex. 1008, 5:24).

Id. ¶ 30. Noting that Shannon expressly teaches the possibility of using a variety of fasteners, Dr. Kudrowitz testifies that a person of ordinary skill in the art “would be aware of and turn to Aprile's magnetically-released fastener to allow the toy of Shannon to open up in response to an external magnet. Such magnetic interaction and springing effect would readily

provide an effect like ‘magic’ for children.” *Id.* ¶ 252. On the whole, Petitioner’s evidence persuades us that a person of ordinary skill in the art would have had reason, based on teachings in the references themselves, to modify Shannon’s toy to use Aprile’s magnetically released fastener. In particular, weighing the parties’ evidence and arguments, Petitioner persuades us that a person of ordinary skill in the art would have understood that using Aprile’s magnetically released fastener in Shannon’s toy would have contributed to the user’s interest level.

Patent Owner does not rebut persuasively Petitioner’s evidence that a person of ordinary skill in the art would not have recognized the combination would have contributed to the toy’s value by making it interesting. Patent Owner argues that

Toy designers commonly desire interesting effects and want to be fun for play—that is the whole point of toy design. Therefore, general allegations of motivations to combine because the toy would be fun to play with does not provide a motivation to combine for the *specific combination* [Petitioner] advances.

PO Resp. 39. We do not find this persuasive. Petitioner’s evidence demonstrates that a person of ordinary skill in the art would have understood that Aprile’s magnetically released latch, specifically, creates interest by virtue of releasing as if “by magic.” Given that toy designers desire interesting effects, the recognition of an interesting effect provided by Aprile’s latch demonstrates a reason that a person of ordinary skill in the art would have had for the specific addition of Aprile’s latch to Shannon’s toy.

We do not agree with Patent Owner’s arguments that Petitioner’s obviousness assertions rest only on improper hindsight and assertions that the references “could be” combined. *Id.* at 40–45. Petitioner persuasively

shows why a person of ordinary skill in the art would have been motivated to combine the references' teachings. Specifically, given Shannon's teaching of using alternate fasteners and Aprile's teaching of its fastener providing the interesting effect of opening as if "by magic," Petitioner persuades us that a person of ordinary skill in the art would have been motivated to provide increased interest in Shannon's toy with the "magic" of Aprile's fastener. Petitioner persuades us that a person of ordinary skill in the art would have had this motivation based on the teachings of the references, not hindsight. Patent Owner's criticism of other arguments and evidence presented by Petitioner does not diminish Petitioner's demonstration of a motivation rooted in the references' teachings.

Petitioner also persuades us that a person of ordinary skill in the art would have had a reasonable expectation of success in modifying Shannon's toy to use Aprile's magnetically released fastener. As Petitioner and Dr. Kudrowitz note, Aprile explains that its magnetically released fastener "is usable to advantage in all those applications that involve an extremely low cost, limited overall dimension, and ease of installation." Ex. 1008, 5:3–6; Pet. 73–74; Ex. 1002 ¶ 244. Indeed, as Dr. Kudrowitz notes, Aprile specifically teaches using its magnetically released fastener in dolls. *E.g.*, Ex. 1008, 2:23–25; Ex. 1002 ¶ 247. On the whole, we find the evidence supports Dr. Kudrowitz's testimony that a person of ordinary skill in the art applying Aprile's disclosure of a magnetically released latch for a doll or other toy to Shannon's doll would have been within the skill in the art. Ex. 1002 ¶¶ 247, 252.

We do not agree with Patent Owner's assertion that the proposed modification would require "substantial redesign" and would render

Shannon's toy unsuitable for its intended purpose. PO Resp. 32–38. Patent Owner's arguments rest heavily on Dr. Janét's testimony, and he bases his opinions heavily on speculative assertions without objective support. For example, without citing supporting evidence, Dr. Janét opines that "[i]t likely would not be sufficient to make the hook a magnetically-responsive metal, as the magnetic strength would likely be insufficient to effectuate the magnetic force when the Shannon toy is in the spherical, rolled-up condition." Ex. 2001 ¶ 96. From this starting point, Dr. Janét further hypothesizes that "a toy designer would need to undergo numerous hours of testing, including testing various permutations of magnets of different sizes, strength, and cost in combination with a variety of spring options to develop magnets that could be repeatedly and predictably locked and unlocked under the proposed operating conditions." *Id.* ¶ 97. Dr. Janét's speculative testimony does not compare favorably to Dr. Kudrowitz's opinion, which is supported by the contemporaneous, documentary evidence of Aprile, which evinces that it was within the level of skill in the art to apply the magnetically released fastener to a doll.

We also do not agree with Patent Owner's assertion that Shannon teaches away from using a magnetically released fastener like Aprile's. PO Resp. 23–29. A reference teaches away "when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Mouttet*, 686 F.3d 1322, 1333–34 (Fed. Cir. 2012)); *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1364 (Fed. Cir. 2006) ("We will not read into a reference a teaching away from a process where no such language

exists.”). A reference does not teach away, however, if it merely expresses a general preference for an alternative invention but does not “criticize, discredit, or otherwise discourage” investigation into the invention claimed. *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004). *Fulton* further explains

[O]ur case law does not require that a particular combination must be the preferred, or the most desirable, combination described in the prior art in order to provide motivation for the current invention. “[T]he question is whether there is something in the prior art as a whole to suggest the *desirability*, and thus the obviousness, of making the combination,” not whether there is something in the prior art as a whole to suggest that the combination is the *most desirable* combination available.

391 F.3d at 1200. Additionally, “obviousness must be determined in light of all the facts, and there is no rule that a single reference that teaches away will mandate a finding of nonobviousness. Likewise, a given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine.” *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006).

As the cornerstone of its teaching away argument, Patent Owner cites Shannon’s statement that

The foldability and internal spring features of toys embracing the concepts of the invention make the toy particularly attractive for younger children unable to manipulate toys having openings through which elements must be stuffed and drawn or toys which have varying shapes and require reasoned manipulation as typical of the prior art. The invention thus contributes to playing pleasure and education for the very young.

Ex. 1007, 9:67–10:7; PO Resp. 23–24. Patent Owner suggests that this would discourage a person of ordinary skill in the art from modifying Shannon’s toy in a way that would require “reasoned manipulation” and

hinder its use by “the very young.” PO Resp. 23–29. Similarly, Dr. Janét opines that

Because Shannon says that its toy is attractive for younger children unable to manipulate toys with openings through which elements must be *stuffed* and *drawn*, then this would naturally discourage using complicated latching mechanism that require the careful drawing of a pivoting, spring-loaded hook through an eye, as proposed by Petitioner.

Ex. 2001 ¶ 89.

Elaborating on its teaching away argument, Patent Owner asserts that “[t]he modification requires a pivotable, hinged hook that includes a magnet (or metal) that engages an eye. (Ex. 2002, 54:3-8). A very young child would not have the reasoned manipulation or manual dexterity to pivot the hook into engagement with the eye.” PO Resp. 24. In support of this, Patent Owner cites Dr. Janét’s opinion that “[a] very young child would not be expected to have the reasoned manipulation (which Shannon says is to be avoided in its toy design) or manual dexterity to pivot the hook into engagement with the eye.” Ex. 2001 ¶ 85. Discussing the process of folding Shannon’s toy and noting that “[b]ecause the child is young, their hand is small,” Dr. Janét opines that “there is not a lot of room for the child to work in guiding the eye over the hook.” *Id.* Patent Owner also argues that

Modifying the Shannon toy to be one where the child peels apart the appendages to one where the child rolls the Shannon toy to the Tomiyama magnet presents a more complex toy use. *Id.*; Ex. 1007, 6:34-42, 7:26-32, 8:17-20. Shannon describes its toy for the “very young.” (Ex. 1007, 10:6-7; Ex. 2002, 15:20-21 (Dr. Kudrowitz confirming Shannon is “intended for children”)). Very young children do not have the reasoned manipulation to place the second toy component of the external magnet at a first location, move to a second location, and accurately roll the

Shannon toy towards the external magnet at the first location.
(Ex. 2001, ¶ 80).

PO Resp. 27.⁷ In connection with this argument, Patent Owner cites Dr. Janét’s testimony that

The child would also need advanced dexterity to roll the Shannon toy towards the external magnet, which is more complex than simply peeling apart the appendages. As I discuss below, Shannon discusses the desire for a toy that avoids requiring the child to have “reasoned manipulation.” (Ex. 1007, 10:1-6). Very young children do not generally have the reasoned manipulation to place the external magnet at a first location, move to a second location, and accurately roll the Shannon toy towards the external magnet at the first location.

Ex. 2001 ¶ 80.

Dr. Kudrowitz disagrees with Dr. Janét’s opinion that the proposed modification would be expected to result in a toy requiring “reasoned manipulation” that would change the appropriate age group for the toy. Ex. 1020 ¶¶ 51–60. For example, Dr. Kudrowitz disagrees with Dr. Janét’s opinion that a young child would be expected to lack the reasoned manipulation to use Shannon’s toy with Aprile’s latch. *Id.* ¶ 60. Dr. Kudrowitz also disagrees with Dr. Janét regarding the expectations of a child rolling Shannon’s toy toward a magnet. *Id.* ¶ 59. Dr. Kudrowitz explains that “[i]n my opinion, even a three- or four-year-old child is able to play with two or more magnets by rolling one toward the other.” *Id.*

⁷ Here and elsewhere, we reference Patent Owner’s arguments discussing Tomiyama because Patent Owner incorporates those arguments by reference to address Petitioner’s assertions of obviousness over Aprile and Shannon. PO Resp. 63.

We find that the record evidence does not support Patent Owner’s contention that the proposed modification would transform Aprile’s toy from one that does not require “reasoned manipulation” to one that does require “reasoned manipulation” and changes the appropriate age range for the toy. Patent Owner’s argument that the modification would result in a new requirement for reasoned manipulation rests heavily on Dr. Janét’s testimony. *See* PO Resp. 23–29. Dr. Janét does not cite supporting evidence to show persuasively how “reasoned manipulation” would be understood by a person of ordinary skill in the art, or why a person of ordinary skill in the art would have thought the proposed modification would have required “reasoned manipulation.” *See* Ex. 2001 ¶¶ 80–89. Dr. Janét’s reasoning rests on vague assertions. For example, Dr. Janét testifies that “[b]ecause the child is young, their hand is small.” *Id.* ¶ 85. Similarly, referring to Shannon’s Figure 8, Dr. Janét states that “I note that in Fig. 8, the legs are folded up on either side of the belt buckle” and concludes from this that “there is not a lot of room for the child to work in guiding the eye over the hook.” *Id.* We find vague, unsubstantiated assertions like this of little persuasive value.

On the whole, we find Dr. Kudrowitz’s testimony about the “reasoned manipulation” argument more credible than Dr. Janét’s. As an example, Dr. Janét and Dr. Kudrowitz disagree regarding whether a “very young child” would have sufficient “reasoned manipulation” to roll Shannon’s toy toward a magnet. *See* Ex. 2001 ¶ 80; Ex. 1020 ¶ 59. Dr. Janét testifies that the age range for Shannon’s toy would extend to 4-year-old children (Ex. 1021, 201:11–17), yet believes that such a child would lack the “reasoned manipulation” to roll Shannon’s toy toward a magnet (Ex. 2001 ¶ 80). Dr.

Kudrowitz testifies to the contrary. Ex. 1020 ¶ 59. Although neither declarant cites supporting evidence for his opinion, we find Dr. Janét’s testimony that a four-year-old lacks the ability to roll Shannon’s toy toward a magnet dubious at best.

Thus, as noted above, we do not find that the record supports Patent Owner’s assertion that the proposed modification of Shannon would create a new need for “reasoned manipulation” from the user. Thus, to the extent Shannon may teach away from a toy requiring “reasoned manipulation,” we find that Shannon does not teach away from modifying its toy to have Aprile’s latch.

Moreover, the record does not support Patent Owner’s assertion that Shannon teaches away from a toy that requires reasoned manipulation. In particular, we find that Shannon does not criticize, discredit, or otherwise discourage toys that require “reasoned manipulation,” but instead touts an advantage of its toy, characterizing the toy as “particularly attractive for younger children, . . . contribut[ing] to playing pleasure and education for the very young.” Ex. 1007, 9:67–10:7. No evidence of record persuades us that Shannon’s positive discussion of a toy “particularly attractive” for one age group discourages pursuit of toys that might be more suitable for different age groups. Regarding this, Dr. Janét testifies that Shannon’s discussion of advantages “would naturally discourage” modifications related to advantages. Ex. 2001 ¶ 89. But this testimony is conclusory and fails to recognize that “a given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine.” *Medichem*, 437 F.3d at 1165.

Here, to the extent the proposed modification might somewhat complicate the toy's use for certain children, Petitioner persuades us that a person of ordinary skill in the art would have recognized the value of the proposed modification for making the toy more interesting by allowing it to spring open as if "by magic." Thus, as a whole, the record evidence persuades us that a person of ordinary skill in the art would have been motivated to modify Shannon's toy with Aprile's latch for the purpose of enhancing at least some children's interest, notwithstanding Shannon's disclosure of advantages for certain children.

Regarding the dispute over whether a person of ordinary skill in the art would have viewed the proposed modification as hazardous, we find Petitioner's position more persuasive. Patent Owner argues that adding Aprile's latch to Shannon's toy would present various hazards, including the possibility of a user swallowing the external magnet and the possibility of the fastener harming the user. PO Resp. 26–28. Petitioner argues that a person of ordinary skill in the art would have been able to address the potential hazards identified by Patent Owner. Pet. Reply 17–18. Dr. Janét and Dr. Kudrowitz similarly disagree on this matter. Dr. Janét opines that the magnet and fastener of Aprile present potential hazards viewed as problematic by a person of ordinary skill in the art. Ex. 2001 ¶¶ 90–91. Dr. Kudrowitz testifies that a person of ordinary skill in the art would have known how to address these potential hazards. Ex. 1020 ¶¶ 61–67. We find the record evidence supports the position of Petitioner and Dr. Kudrowitz, not that of Patent Owner and Dr. Janét. For example, Aprile itself discloses using its fastener, with its external magnet in a toy, evincing that it was known in the art to implement the fastener and its external magnet in a

manner viewed as sufficiently safe by those of skill in the art. *E.g.* Ex. 1008, 5:25–6:26.

Additionally, Petitioner persuades us that the proposed modification of Shannon would not change its principle of operation. Patent Owner argues that “Shannon’s toy design desires for the user to manipulate the toy by ‘peeling’ away the appendages.” PO Resp. 29. Consistent with this, Dr. Janét testifies that “Shannon is a ‘manipulation’ type of toy, where the enjoyment for the child is the peeling apart the various appendages to obtain the surprise transformation. Shannon even says ‘[h]inges interconnecting the body and appendages facilitate movement for manipulation between configurations.’” Ex. 2001 ¶ 79 (quoting Ex. 1007, 2:34–36). Petitioner counters that “Shannon is a transformation toy. The entertainment of the toy stems from transformation.” Pet. Reply 19. Consistent with this, Dr. Kudrowitz testifies that Shannon’s “principle of operation is transformation of the toy, it is not about magnetic attraction or peeling the appendages apart.” Ex. 1020 ¶ 69. In support of this, Dr. Kudrowitz cites a number of portions of Shannon mentioning or alluding to “transformation.” *Id.*

The evidence supports the position of Petitioner and Dr. Kudrowitz, not that of Patent Owner and Dr. Janét. In particular, comparing the portions of Shannon cited by the declarants, we agree with Dr. Kudrowitz that Shannon’s disclosure emphasizes transformation of the toy, not manipulation. For example, contrary to Dr. Janét’s opinion that the toy is a “‘manipulation’ type of toy” (Ex. 2001 ¶ 79), Shannon’s title “Transformable Toy” conveys that the focus of the toy is transformation, not manipulation. Ex. 1007, code [54]. Similarly, Shannon’s Abstract

summarizes the toy as “transformable” without any mention of “manipulation.” *Id.* at code [57].

Additionally, we find unavailing Patent Owner’s argument that “[t]he difference between using a magnet to trigger a latch to release versus using a magnet to hold a latch closed was described **by the Board** as a ‘material difference.’” PO Resp. 30. Patent Owner contends that

It would be inconsistent and very improper for the Board to find the difference between using a magnet to release a latch versus hold a latch closed as *material* for one analysis (the § 325(d) analysis) while finding such a difference as not material or changing the principle of operation for the unpatentability analysis applying Tomiyama’s latching mechanism (or the new hood and eye latching mechanism) to Shannon.

Id. at 30–31. As noted by Patent Owner, our discussion of a “material difference” in a prior case related to applying 35 U.S.C. § 325(d) and its provision that “the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.” IPR2018-01673, Paper 7, 21–24, 39 (“1673 Inst. Dec.” or “the 1673 Institution Decision”). In particular, because we noted that in the examination process, “Patent Owner emphasized Hopkins’ use of a magnetically retained latch, as opposed to a magnetically released latch” (1673 Inst. Dec. 24), we identified Tomiyama’s disclosure of magnetically released latch as a “material difference” (*id.* at 23). Thus, the difference was identified as material because it related to a feature Patent Owner alleged as missing from the prior art previously presented to the Office. Contrary to Patent Owner’s suggestion, our prior discussion of a “material difference” says nothing of Shannon’s principle of operation.

Additionally, Petitioner's showing of obviousness is not undermined by Patent Owner's arguments that (1) Aprile does not teach a "transformable toy" (PO Resp. 56–57); (2) Aprile's container is not "rollable" (*id.* at 57–58); (3) the Aprile container modified to include rounded corners is also not "rollable" (*id.* at 58–63); and (4) "[i]t [w]ould [n]ot [b]e [o]bvius to [m]odify Aprile's [c]ontainer to [h]ave [m]ultiple [c]laimed [a]uxiliary [c]omponents or a [s]econd [f]igure [s]hape [t]hat [i]s a [f]ictitious [c]haracter" (*id.* at 63–65). Petitioner relies on Shannon as teaching these features. Petitioner asserts that Shannon teaches a "transformable toy." Pet. 28, 76. Petitioner also argues that Shannon teaches "wherein in the closed position, the first toy component is rollable." *Id.* at 33–34, 76. Additionally, Petitioner asserts that "Shannon discloses '*a plurality of auxiliary components coupled with the body and rotatable towards the body to a closed position and rotatable away from the body to an open position.*'" *Id.* at 53, 81. Petitioner also asserts that "Shannon discloses '*wherein in the open position, the toy body and the plurality of auxiliary components of the first toy component present a second figure shape that is a fictitious character including a head, a body, and one or more appendages.*'" *Id.* at 53, 82. We are persuaded by Petitioner's undisputed assertions that Shannon teaches all of these features. Thus, after Petitioner's proposed modification, Shannon's toy would have a magnetically released latch in a "transformable toy" that is "rollable" and has the "plurality of auxiliary components," as well as a "second figure shape that is a fictitious character." Petitioner persuades us that it would have been obvious to modify Shannon's toy to have Aprile's magnetically released fastener and the resulting toy would have met all the limitations of the challenged claims, rendering it moot

whether features other than the magnetically released fastener are taught by Aprile or would have been obvious to add to Aprile.

Additionally, we do not agree with Patent Owner's argument that Petitioner did not explain sufficiently the combinations of the cited references that allegedly would have been obvious. PO Resp. 56. Patent Owner not only "could possibly understand" Petitioner's contentions (*id.*), Patent Owner did in fact understand the modifications of the prior art references that Petitioner alleged would have been obvious. Patent Owner understood that Petitioner argued it would have been obvious in view of the references to modify Shannon's toy with a magnetically released latch like Aprile's. *See* Pet. 75 ("This is an example of using a known fastener (the magnetic latch of Aprile) exactly as intended (to cause an item to spring open when a magnet is brought near) to achieve the predicted result (the ball of Shannon will open magnetically)."); Dec. 32 ("Petitioner has demonstrated at least a reasonable likelihood of establishing that it would have been obvious in view of Aprile to modify Shannon's ball toy to use a magnetically released latch, and that doing so would have produced the invention recited in claim 1."); PO Resp. 63 ("[Patent Owner] discussed the non-obviousness of modifying Shannon to include an externally-releasable, magnetic locking component in Section V(B)(1) for Ground 1, and such arguments and evidence are incorporated for this Ground 3."). Patent Owner also understood Petitioner's alternate argument that it allegedly would have been obvious in view of the references to modify Aprile's container by rounding its bottom. Pet. 77 ("simply rounding the bottom of [Aprile's] toy box to form a round shape would have been obvious in light of Shannon."); PO Resp. 60 ("Changing [Aprile's] box-shaped container

from a box to being rollable by rounding the bottom (Pet 77) would require substantial redesign.”).

c. Summary Regarding Petitioner’s Allegation of Obviousness over Aprile and Shannon

Having reviewed the full record, we determine that Petitioner has demonstrated obviousness of claims 1–20 over Aprile and Shannon. For the reasons discussed above, Petitioner persuades us that it would have been obvious to modify Shannon’s toy to use Aprile’s magnetically released fastener. Additionally, Petitioner persuades us that the resulting apparatus would meet all of the limitations of claims 1–20.

E. Remaining Grounds

Petitioner argues that claims 1–3 and 5–8 are anticipated by Tomiyama. Pet. 73. Petitioner also asserts that claims 1–3, 5, 6, and 8 are anticipated by Wilhelm. *Id.* at 57–72. Because we determine above that Petitioner has demonstrated claims 1–20 would have been obvious over Aprile and Shannon, we do not reach Petitioner’s assertion of anticipation by Tomiyama or its assertion of anticipation by Wilhelm. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359 (2018) (holding a petitioner “is entitled to a final written decision addressing all of the claims it has challenged”); *Boston Sci. Scimed, Inc. v. Cook Grp. Inc.*, Nos. 2019-1594, -1604, -1605, 2020 WL 2071962, at *4 (Fed. Cir. Apr. 30, 2020) (non-precedential) (recognizing that the “Board need not address issues that are not necessary to the resolution of the proceeding” and, thus, agreeing that the Board has “discretion to decline to decide additional instituted grounds once the petitioner has prevailed on all its challenged claims”).

F. Patent Owner's Remaining Argument

Patent Owner states that the Federal Circuit “correctly held that [Administrative Patent Judges (“APJs”)] are unconstitutionally appointed” but “incorrectly held that it could cure this infirmity by revising statutory language and purporting to make APJs removable at will.” PO Resp. 65 (citing *Arthrex, Inc. v. Smith & Nephew, Inc.*, 941 F.3d 1320 (Fed. Cir. 2019)). Patent Owner argues that the “APJs appointed to this proceeding, therefore, remain unconstitutionally appointed, and only Congress can implement a correction” and the institution of the present proceeding “should, therefore, be vacated.” *Id.*

During oral argument, in response to panel questions, Patent Owner’s counsel indicated that Patent Owner believes the issue has been resolved, Patent Owner does not maintain the argument, and there is no issue related to the Appointments Clause that requires our resolution. Tr. 96:19–97:7. We, therefore, do not need to decide the issue.

IV. CONCLUSION⁸

In summary:

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–20	§ 103(a)	Tomiyama, Shannon ⁹		
1–3, 5–8	§ 102(b)	Tomiyama ¹⁰		
1–3, 5, 6, 8	§ 102(b)	Wilhelm ¹¹		
1–20	§ 103(a)	Aprile, Shannon	1–20	
Overall Outcome			1–20	

⁸ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

⁹ As explained in Section III.C.2, we do not reach the challenge to claims 1–20 based on Tomiyama and Shannon because the same claims are determined to be unpatentable over Aprile and Shannon.

¹⁰ As explained in Section III.E, we do not reach the challenge to claims 1–3 and 5–8 based on Tomiyama because the same claims are determined to be unpatentable over Aprile and Shannon.

¹¹ As explained in Section III.E, we do not reach the challenge to claims 1–3, 5, 6, and 8 based on Wilhelm because the same claims are determined to be unpatentable over Aprile and Shannon.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–20 of U.S. Patent No. 9,868,073 B2 have been shown, by a preponderance of the evidence, to be unpatentable; and

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

IPR2019-00900
Patent 9,868,073 B2

PETITIONER:

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