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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* DANE HANS CHRISTIANSON

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Appeal 2019-006382  
Application 14/210,867  
Technology Center 3700

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Before BRETT C. MARTIN, WILLIAM A. CAPP, and LEE L. STEPINA,  
*Administrative Patent Judges.*

CAPP, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant<sup>1</sup> seeks our review under 35 U.S.C. § 134(a) of the final rejection of claims 1 and 5–10 under 35 U.S.C. § 112(b) as indefinite and as unpatentable under 35 U.S.C. § 103(a) over Abu Shumays (US 4,593,907, iss. June 10, 1986) and Li (US 5,992,850, iss. Nov. 30, 1999). We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies Moving Parts LLC as the applicant and real party in interest. Appeal Br. 1.

## THE INVENTION

Appellant's invention relates to three-dimensional logic puzzles.

Spec. 1. Claim 1, reproduced below with paragraph indentation added, is illustrative of the subject matter on appeal.

1. A non-cubic logic puzzle comprises:

a core mechanism to provide a three-dimensional origin of the non-cubic logic puzzle, wherein the core mechanism includes Part 1, Part 3, and Part 10; and

a plurality of interconnecting puzzle pieces coupled to the core mechanism, wherein the plurality of puzzle pieces includes Part 2 and Parts 4 through 9, and wherein the plurality of puzzle pieces are arranged in:

a first non-cubic pattern in a first plane with respect to three-dimensional origin, wherein the first non-cubic pattern includes a first set of the puzzle pieces arranged into a cross shape when the non-cubic logic puzzle is in a beginning state, wherein the cross shape includes at least a first three-by-three piece center square;

a second non-cubic pattern in a second plane with respect to the three-dimensional origin, wherein the second non-cubic pattern includes a second set of the plurality of puzzle pieces arranged in a rectangular shape when the non-cubic logic puzzle is in a beginning state, wherein the rectangular shape includes at least a second three-by-three piece center square;

wherein the plurality of puzzle pieces change configurations with respect to the beginning state during play and to return to a completed state when the non-cubic logic puzzle is successfully solved,

wherein the completed state substantially matches the beginning state,

wherein during play, the first non-cubic pattern deviates from the cross shape and the second non-cubic pattern deviates from the rectangular shape,

wherein the plurality of interconnecting puzzle pieces allows, for a given plane, a plane-row of puzzles pieces to rotate about the three-dimensional origin in a plane-row

direction and a plane-column of puzzles pieces to rotate about the three-dimensional original in a plane-column direction, wherein the plurality of interconnecting puzzle pieces prohibits, for the given plane, an outer plane-column from rotating about the three-dimensional origin in the plane-column direction when the outer plane-column includes, in another plane, less than complete rows and columns of puzzle pieces and wherein the plurality of interconnecting puzzle pieces prohibits, for the given plane, an outer plane-row from rotating about the three-dimensional origin in the plane-row direction when the outer plane-row includes, in another plane, less than the complete rows and columns of puzzle pieces.

## OPINION

### *Indefiniteness*

The Examiner deems claim 1 to be indefinite because terms such as “part 1,” “part 3,” etc. fail to define sufficiently specific structure. Final Act. 2.

In traverse, Appellant refers us to Figures 30–34 as illustrating how the parts in Figures 35–44 are put together. Appeal Br. 4. Appellant represents that Figures 44 and 45 are merely “slightly different perspectives” of Figures 35–44 and that Figures 47–56 are merely “slightly different perspectives” of Figures 35–44. *Id.* Appellant argues that the figures clearly illustrate the various claimed parts and how they interconnect. *Id.* Appellant cites to MPEP § 608 as justifying its claiming vernacular. *Id.*

In response, the Examiner maintains that MPEP § 608 does not justify Appellant’s claiming and recites well established law that, although Appellant may rely on the Specification for support, limitations from the Specification are not read into the claims. Ans. 6–7 citing *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993). The Examiner further cites to *Ex parte Fressola*, 27 USPQ2d 1608 (BPAI 1993) for the proposition that

incorporation by reference to a figure is permitted only in exceptional circumstances. *Id.* at 1609.

Claim 1 recites to 10 different “parts” that are distinguished only by numbering (part 1, 2, 3, etc.). Claims App. A practitioner cannot differentiate between say “part 1” and “part 2” without incorporating details from the Specification and the drawings. Claim 1 does not explicitly recite that such details are incorporated into the claim by reference. *Id.*

The PTO can properly reject a claim as indefinite if the claim is ambiguous, vague, incoherent, opaque, or otherwise unclear. *In re Packard*, 751 F.3d 1307, 1311 (Fed. Cir. 2014). The test for definiteness under 35 U.S.C. § 112, is whether “those skilled in the art would understand what is claimed when the claim is read in light of the specification.” *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576 (Fed. Cir. 1986) (citations omitted). Claims are indefinite if a person of ordinary skill in the art cannot translate the definition into meaningfully precise claim scope. *Haliburton Energy Services, Inc. v. M-I LLC*, 514 F.3d 1244, 1251 (Fed. Cir. 2008). “[P]atentees are allowed to claim their inventions broadly, [but] they must do so in a way that distinctly identifies the boundaries of their claims.” *Id.* at 1253. Rigorous application of the statutory standard to particularly point out and distinctly claim the subject matter regarded to be the invention serves an important public notice function. *Predicate Logic, Inc. v. Distributive Software, Inc.*, 544 F.3d 1298, 1300 (Fed. Cir. 2008).

We agree with the Examiner that the scope of claim 1 cannot be understood without incorporating details from the Specification and the claims. Appellant’s reliance on MPEP § 608 is misplaced. Section 608 is directed to providing disclosure to satisfy the written description

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requirement of 35 U.S.C. § 112(a). The indefiniteness provisions of Section 112, however, are provided in subpart (b) of the statute which provides as follows:

The specification shall conclude with one or more claims *particularly pointing out and distinctly claiming* the subject matter which the inventor or a joint inventor regards as the invention.

35 U.S.C. § 112(b) (emphasis added). Appellant's claiming technique of referring to structural components by part number falls short of "particularly pointing out" and "distinctly claiming" the invention.

Even if we were inclined to incorporate details from Appellant's Specification and drawings (we are not so inclined), such would also be an improper manner of claiming. The application section of the MPEP provides, in pertinent part, as follows.

Where possible, claims are to be complete in themselves. Incorporation by reference to a specific figure or table "is permitted only in exceptional circumstances where there is no practical way to define the invention in words and where it is more concise to incorporate by reference than duplicating a drawing or table into the claim. Incorporation by reference is a necessity doctrine, not for applicant's convenience."

MPEP § 2173.05(s), quoting *Ex parte Fressola*, 27 USPQ2d 1608, 1609 (BPAI 1993). The foregoing provision was recently applied under similar facts in the case of *Ex parte Maltseva*, 2019-004277, 2020 WL 2473912 (PTAB, May 7, 2020). We are not inclined to incorporate Appellant's Specification and drawings into the claim in the absence of Appellant reciting an explicit incorporation by reference, which Appellant has failed to do. Claims App. Moreover, even if we were so inclined (we are not),

Appellant has provided no justification for a “necessity” of doing so under MPEP § 2173.05(s) and interpretive case authorities.

We sustain the Examiner’s Section 112(b) rejection of claim 1 as well as that of claims 5–10 at least by reason of their dependency from claim 1.

*Unpatentability of Claims 1 and 5–10  
over Abu-Shumays and Li*

Appellant argues claims 1 and 5–10 as a group. Appeal Br. 4–6. We select claim 1 as representative. *See* 37 C.F.R. § 41.37(c)(1)(iv). Our analysis of the art rejection is made by applying Appellant’s claim language as best understood, keeping in mind that we consider the claim to be indefinite as discussed above.

The Examiner finds that the combination of Abu-Shumays and Li discloses or suggests all of the limitations of claim 1 and that it would have been obvious to combine their respective teachings to achieve the claimed invention. Final Act. 2–4.<sup>2</sup>

Appellant argues that one cannot simply modify a 3x3x3 cube with a face including an extension. Appeal Br. 5. Appellant argues that its invention distinguishes over the prior art by providing a 3x3x3 center cube that has first and second non-cubic patterns in first and second planes. *Id.* at 6.

In response, the Examiner takes the position that Appellant is attacking the cited prior art references individually, rather than considering their teachings taken together. Ans. 8. The Examiner finds that reciting a

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<sup>2</sup> The Final Action incorporates by reference findings and conclusions from previous Office Actions dated June 21, 2017; November 22, 2016; April 6, 2016; September 29, 2015; and February 25, 2015. Final Act. 2.

cross-shape in a first plane with a 3x3 center and a non-cubic pattern in a second plane in a rectangular shape is an obvious extension of the teaching of Abu-Shumays in view of the teachings of Li. *Id.* at 9.

The instant invention, as well as Abu-Shumays and Li, are variations on the well-known amusement instrumentality known as Rubik's Cube. Spec. 1; Abu-Shumays, Abstract; Li, col. 3, ll. 4–5, Fig. 1. Rubik's Cube is a three-dimensional puzzle. *See* U.S. Patent 4,378,116 to Rubik, iss. Mar. 29, 1983. The commercial version(s) of Rubik's Cube known in the prior art presented logic puzzles in a 2x2x2 configuration and a 3x3x3 configuration.<sup>3</sup> Abu-Shumays is directed to variations and extensions to the 2x2x2 cube. Abu-Shumays, Abstract. Among other things, Abu-Shumays discloses puzzles that assume a variety of non-cubic shapes. *Id.* Figs. 4–9. One of the non-cubic shapes is that of a cross. *Id.* Fig. 8. Li is directed to a 4x4x4 cube puzzle. Li, col. 4, ll. 50–60.

The argument section of Appellant's brief devoted to the Section 103 rejection is less than two pages in length and is remarkably cursory and conclusory. *See* generally Appeal Br. The brief summarizes Appellant's observations on Abu-Shumays and then asks a series of seemingly rhetorical questions. Appeal Br. 4–5. Appellant makes no effort to discuss the Li reference or respond to the Examiner's findings that Abu-Shumays could have been successfully combined with Li to achieve the claimed invention. There is no discussion or analysis of the mechanics involved in twisting and turning the puzzle to arrive at the claimed configuration. *Id.* Appellant presents neither evidence nor persuasive technical reasoning that arriving at

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<sup>3</sup> *See* [https://en.wikipedia.org/wiki/Rubik%27s\\_Cube](https://en.wikipedia.org/wiki/Rubik%27s_Cube). Last Accessed May 21, 2020.

the particular configuration of claim 1 requires more than ordinary skill or produces unexpected results. Under the circumstances, Appellant's arguments are not sufficient to apprise us of Examiner error.

In view of the foregoing discussion, we determine the Examiner's findings of fact are supported by a preponderance of the evidence and that the Examiner's legal conclusion of unpatentability is well-founded. We sustain the Examiners' unpatentability rejection of claims 1 and 5-10.

### CONCLUSION

In summary:

<b>Claims Rejected</b>	<b>§</b>	<b>Reference(s)/Basis</b>	<b>Aff'd</b>	<b>Rev'd</b>
1, 5-10	112	Indefinite	1, 5-10	
1, 5-10	103	Abu-Shumays, Li	1, 5-10	
<b>Overall Outcome</b>			1, 5-10	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

**AFFIRMED**