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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* MARIA BELLA

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Appeal 2021-002297  
Application 16/354,679  
Technology Center 2600

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Before MICHAEL J. STRAUSS, JAMES B. ARPIN, and  
CHRISTA P. ZADO, *Administrative Patent Judges*.

STRAUSS, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>  
STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>2</sup> appeals from the Examiner’s decision to reject claims 1–4 and 6–20. *See* Final Act. 1. Claims 1, 10, and 19 are independent; claim 5 is canceled. Appeal Br. 19–24, Claims App. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse and enter a new ground of rejection.

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<sup>1</sup> We refer to the Specification, filed March 15, 2019 (“Spec.”); Final Office Action, mailed April 8, 2020 (“Final Act.”); Appeal Brief, filed August 31, 2020 (“Appeal Br.”); Examiner’s Answer, mailed December 15, 2020 (“Ans.”); and Reply Brief, filed February 10, 2021 (“Reply Br.”).

<sup>2</sup> Appellant refers to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real parties in interest as the named inventor, Maria Bella, and Robson Forensic, Inc. Appeal Br. 1.

Appellant describes the invention as encompassing “[a] method of training a lifeguard to properly view an area of a swimming pool or body of water and recognize a swimmer/bather in distress.” Spec., Abstract.

Claim 1, reproduced below with bracketed labels added and limitations determined by the Examiner to recite abstract concepts (Final Act. 3) emphasized in italics, is illustrative of the claimed subject matter:

1. A method of facilitating a lifeguard to supervise swimmers/bathers in a swimming pool or body of water and search for a swimmer/bather in distress, the method comprising:
  - [(i)] *staff mapping the shape of the swimming pool or body of water including any irregularities that may be present;*
  - [(ii)] *the staff determining the number of submersible devices available;*
  - [(iii)] *the staff determining the length of the swimming pool or body of water;*
  - [(iv)] *the staff determining the width of the swimming pool or body of water;*
  - [(v)] *the staff calculating and mapping a grid to determine the positioning of the submersible devices based on the number of submersibles, the length of the swimming pool or body of water, the width of the swimming pool or body of water and the blind spots present;*
  - [(vi)] the staff positioning submersible devices on a bottom of the swimming pool or body of water according to the calculated grid, the submersible devices simulate submerged swimmers/bathers, the submersible device comprising:
    - [(a)] a base having a weighted portion with sufficient weight configured to cause the submersible device to sink to a bottom surface of the swimming pool or body of water, the weighted portion of the base configured for maintaining the base and the submersible device at a specific location in the swimming pool or body of water;
    - [(b)] movable members extending from the base, the movable members have less weight than the base,

- the movable members have sufficient buoyancy to move and sway as the current of water in the swimming pool or body of water changes while the base is maintained at the specific location in the swimming pool or body of water;
- [(c)] the submersible device simulates the refracted appearance a human submerged swimmer/bather in the swimming pool or body of water;
- [(vii)] *the lifeguard viewing the submersible devices and counting the number of submersible devices visible in three-dimensions, based on the location of the lifeguard;*
- [(viii)] *the lifeguard viewing the submersible devices and counting the number of submersible devices visible in three-dimensions under varying environmental and swimmer/bather density conditions;*
- [(ix)] wherein viewing the submersible devices arranged across the bottom of the swimming pool or body of water in the grid trains the lifeguard to effectively search every cubic foot of water of an assigned zone in the swimming pool or body of water;
- [(x)] wherein the location of the lifeguard can prevent the lifeguard from being able to view each of the submersible devices in three dimensions, wherein if the lifeguard cannot view all of the submersible devices in three-dimensions, the lifeguard is deprived of the ability to determine if the swimmer/bather is in distress throughout the lifeguards entire assigned zone in the swimming pool or body of water;
- [(xi)] wherein failure to recognize the swimmer/bather in distress increases the risk of the swimmer/bather suffering a fatal drowning;
- [(xii)] wherein if all of the submersible devices in the calculated grid are not visible in three-dimensions, management staff must relocate the lifeguard so that all of the submersible devices in the grid are visible to the lifeguard in three-dimensions.

## REJECTION

Claims 1–4 and 6–20 stand rejected under 35 U.S.C. § 101 as directed to a judicial exception (i.e., an abstract idea), without significantly more. Final Act. 4–5.

## STANDARD OF REVIEW

We review the appealed rejection for error based upon the issues identified by Appellant, and in light of the contentions and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential). Arguments not made are forfeited.<sup>3</sup>

## ANALYSIS

Section 101 defines patentable subject matter: “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101. The U.S. Supreme Court, however, has “long held that this provision contains an important implicit exception” that “[l]aws of nature, natural phenomena, and abstract ideas are not patentable.” *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012) (quotation omitted). “Eligibility under 35 U.S.C. § 101 is a question of law, based on underlying facts.” *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1166 (Fed. Cir. 2018). To determine patentable subject matter, the Court

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<sup>3</sup> See 37 C.F.R. § 41.37(c)(1)(iv) (2013) (“Except as provided for in §§ 41.41, 41.47 and 41.52, any arguments or authorities not included in the appeal brief will be refused consideration by the Board for purposes of the present appeal.”).

has set forth a two-part test.

“First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts” of “laws of nature, natural phenomena, and abstract ideas.” *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 217 (2014).

“The inquiry often is whether the claims are directed to ‘a specific means or method’ for improving technology or whether they are simply directed to an abstract end-result.” *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1326 (Fed. Cir. 2017). A court must be cognizant that “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas” (*Mayo*, 566 U.S. at 71), and “describing the claims at . . . a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to § 101 swallow the rule.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016).

Instead, “the claims are considered in their entirety to ascertain whether their character as a whole is directed to excluded subject matter.” *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015).

If the claims are directed to an abstract idea or other ineligible concept, then we continue to the second part and “consider the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 79, 78). The Court has “described step two of this analysis as a search for an ‘inventive concept’—*i.e.*, an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself.” *Id.* at 217–18 (quotation omitted).

The U.S. Patent and Trademark Office has published revised guidance on the application of § 101. USPTO, *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Guidance”). The Manual of Patent Examining Procedure (“MPEP”) incorporates this revised guidance and subsequent updates at Section 2106 (9th ed. Rev. 10.2019, rev. June 2020).<sup>4</sup>

Under Step 2A, the Office first looks to whether the claim recites:

- (1) Prong One: any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes); and
- (2) Prong Two: additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, does the Office then, under Step 2B, look to whether the claim:

- (3) adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or
- (4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

MPEP § 2106.05(d).

The Examiner concludes that claims 1–4 and 6–20 are directed to patent-ineligible subject matter. Final Act. 4. We select independent

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<sup>4</sup> All references to the MPEP are to the Ninth Edition, Revision 10.2019 (Last Revised June 2020), unless otherwise indicated.

claim 1 as representative for this rejection.

Analyzing claim 1 under Step 2A, Prong One, the Examiner determines the mapping, determining, and viewing/observing steps of claim 1's elements (i)–(v), (vii), and (viii) can be performed in the mind and, accordingly, “fall[] within the ‘Mental Processes’ grouping of abstract ideas.” *Id.* at 4. Under Prong Two of the analysis, the Examiner finds as follows:

The judicial exception is not integrated into a practical application. In particular, the claims only recite additional elements - positioning submersible devices on the bottom of the swimming pool. Such submersible devices are merely weighted devices with color and buoyancy acted as visual input to the user/viewer; - facilitating a lifeguard if a risk is identified, which is simply a natural human reaction to a drowning at the swimming pool. And the so-called “submersible devices” simply simulate distressed persons. ***They are not a machine***, such as a particular computer or processor that would assist the lifeguard to “map”, “determine”, “calculate”, “view” or “analyze” the person in need. Accordingly, these additional elements do not integrate the abstract idea into a practical application because they do not impose any meaningful limits on practicing the abstract idea. Thus, the claims are directed to an abstract idea.

*Id.* at 5.

Appellant contends, “[t]he claimed subject matter, and in particular the submersible devices, are physical rather than being a mere mental process, and thus is not an abstract idea.” Appeal Br. 10. Appellant argues as follows:

The specificity of the claim limitations is relevant to the evaluation of several considerations including the use of a particular machine, particular transformation and whether the limitations are mere instructions to apply an exception. If the claim integrates the judicial exception into a practical application based upon evaluation of these considerations, the additional

limitations impose a meaningful limit on the judicial exception, and the claim is eligible. Claims 1, 10 and 19 add specific limitations beyond the judicial exception that are not well-understood, routine or conventional in the field. The use of the submersible devices as claimed is patentably distinct from the prior art.

*Id.* at 12. According to Appellant, “[b]y using the particular submersibles, as specifically recited in the claims, and by calculating and mapping a grid to determine proper position of the submersibles, as claimed and described in the present application, the effectiveness of lifeguard training is enhanced, resulting in less lives being lost.” *Id.* at 12–13.

The Examiner responds as follows:

The so called “submersible devices” are simply used to simulate a swimmer in distress (a visual aid), which are not “significantly more” than a simple item (there is no mechanical/computerized interaction between the submersible device and the staff/lifeguard), for example, rubber duckies with weights. In all, the so-called “submersible devices” in the pool have no mechanical/computerized feedback or interaction with the staff or lifeguard. Figure 3 of the specification shows the submersible device. The submersible device can be a piece of plastic (see paragraph 40 of the specification). The [E]xaminer notes even with “submersible devices” as a simulation of a drowning person, the claim invention is still nothing more than a training exercise for a lifeguard responding to a distress situation (human activity) with some mental process.

Ans. 4–5.

Appellant persuades us of reversible Examiner error. Although the Examiner properly finds that the independent claims recite a judicial exception under Step 2A, Prong One, there is insufficient explanation or findings to support a determination that the additional elements do not integrate the judicial exception into a practical application. Although, as

noted by the Examiner, the Specification describes that “[t]he submersible device can be a piece of plastic” (Final Act. 4 (citing Spec. ¶ 40)), claim 1 recites specific and not insignificant structure. In particular, we are persuaded the submersible devices are machines within the meaning of 35 U.S.C. 101. *Cf. id.* at 7. Specifically, an applicable definition of a machine is a “concrete thing, consisting of parts, or of certain devices and combination of devices.” *Digitech Image Techs. v. Electronics for Imaging*, 758 F.3d 1344, 1348–49 (Fed. Cir. 2014) (quoting *Burr v. Duryee*, 68 U.S. 531, 570 (1863)). The machine category of statutory subject matter under 35 U.S.C. § 101 “includes every mechanical device or combination of mechanical powers and devices to perform some function and produce a certain effect or result.” *In re Nuijten*, 500 F.3d 1346, 1355 (Fed. Cir. 2007) (quoting *Corning v. Burden*, 56 U.S. 252, 267 (1854)). Thus, claim 1 recites a particular machine, i.e., the submersible device as claimed.

As explained in the 2019 PEG, the evaluation of Prong Two requires the use of the considerations (e.g. improving technology, effecting a particular treatment or prophylaxis, implementing with a particular machine, etc.) identified by the Supreme Court and the Federal Circuit, to ensure that the claim as a whole “integrates [the] judicial exception into a practical application [that] will apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.”<sup>64</sup> These considerations are set forth in the 2019 PEG, MPEP 2106.05(a) through (c), and MPEP 2106.05(e) through (h). Note, a specific way of achieving a result is not a stand-alone consideration in Step 2A Prong Two. However, the specificity of the claim limitations is relevant to the evaluation of several considerations including the use of a particular machine, particular transformation and whether the limitations are mere instructions to apply an exception. If the claim integrates the judicial

exception into a practical application based upon evaluation of these considerations, the additional limitations impose a meaningful limit on the judicial exception, and the claim is eligible at Step 2A.

*October 2019 Update: Subject Matter Eligibility*, 11 (Oct. 17, 2019). Here, the Examiner fails to persuade us that applying the judicial exception by use of a particular machine, i.e., the recited submersible device, does not integrate the judicial exception into a practical application. Therefore, the Examiner fails to show the claim is directed to an abstract idea.

Because, for the reasons discussed above, claim 1 as a whole integrates the recited abstract idea into a practical application of the idea, it is not “directed to” the recited abstract idea and, thus, qualifies as eligible subject matter under § 101. Consequently, the Examiner errs in rejecting independent claim 1. Therefore, we do not sustain the rejection of claim 1, and, for the same reasons, we do not sustain the rejection of independent claims 10 and 19, which include similar limitations. We further do not sustain the rejection of dependent claims 2–4, 6–9, 11–18, and 20 which stand with their respective base claim.

#### NEW GROUND OF REJECTION

We enter a new ground of rejection of claims 1–4 and 6–20 under 35 U.S.C. § 112(b) pursuant to our authority under 37 C.F.R. § 41.50(b) for the following reasons.

The following is a quotation of 35 U.S.C. § 112(b):

**(b) Conclusion.**--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.

Claims 1–4 and 6–20 are rejected under 35 U.S.C. § 112(b) as indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor regards as the invention.

The test for definiteness 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). “The scope of claim language cannot depend solely on the unrestrained, subjective opinion of a particular individual purportedly practicing the invention.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1350 (Fed. Cir. 2005) (citation omitted).

The Specification provides no workable objective standard for the following limitation of claim 1’s element (xi): “wherein failure to recognize the swimmer/bather in distress increases the risk of the swimmer/bather suffering a fatal drowning.” For example, the Specification does not describe how to determine the risk of a swimmer/bather suffering a fatal drowning. Absent such metric, the limitation represents a subjective opinion that renders the limitation and, therefore, claim 1 indefinite. Because independent claims 10 and 19 include similar language reciting a risk of a swimmer/bather in distress suffering a fatal drowning, these claims are likewise indefinite.

Furthermore, our reviewing court has held that a claim is “indefinite when it contains words or phrases whose meaning is unclear.” *In re Packard*, 751 F.3d 1307, 1310 (Fed. Cir. 2014) (per curiam). Moreover, when a claim is amenable to two or more plausible claim constructions, the claim is indefinite for failing to particularly point out and distinctly claim the

subject matter that an applicant considers to be the invention. *See Ex parte Miyazaki*, 89 USPQ2d 1207, 1211 (BPAI 2008).

Here, the Specification does not explain what is meant by the limitation of claim 1's element (xii) reciting "wherein if all of the submersible devices in the calculated grid are not visible in three-dimensions, *management staff must relocate the lifeguard* so that all of the submersible devices in the grid are visible to the lifeguard in three-dimensions" (emphasis added). In particular, it is unclear whether, upon satisfaction of the stated condition (i.e., "all of the submersible devices in the calculated grid are not visible in three-dimensions") if the staff merely is informed of a requirement to relocate the lifeguard *or* if claim 1 includes a step of actually relocating the lifeguard to satisfy the recited desired condition that "all of the submersible devices in the grid are visible to the lifeguard in three-dimensions." Thus, because of this claim language, claim 1 is subject to more than one plausible interpretation and, therefore, is indefinite.

Accordingly, pursuant to our authority under 37 C.F.R. § 41.50(b), we enter a new ground of rejection under 35 U.S.C. § 112(b) of independent claims 1, 10, and 19 as indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor regards as the invention. We further enter a new ground of rejection under 35 U.S.C. § 112(b) of dependent claims 2–4, 6–9, 11–18, and 20 which are indefinite by virtue of dependency from their respective base claims.

#### CONCLUSION

We reverse the Examiner's rejection of claims 1–4 and 6–20 under 35 U.S.C. § 101 as directed to a judicial exception.

Pursuant to our discretionary authority under 37 C.F.R. § 41.50(b), we newly reject claims 1–4, 6–20 under 35 U.S.C. § 112(b) as indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor regards as the invention.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed	New Ground
1–4, 6–20	101	Eligibility		1–4, 6–20	
1–4, 6–20	112(b)	Indefiniteness			1–4, 6–20
<b>Overall Outcome</b>				1–4, 6–20	1–4, 6–20

TIME PERIOD FOR RESPONSE

This Decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.”

37 C.F.R. § 41.50(b) also provides that the Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

- (1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

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(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same Record. . . .

Further guidance on responding to a new ground of rejection can be found in the Manual of Patent Examining Procedure § 1214.01.

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

REVERSED; 37 C.F.R. § 41.50(b)