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EXAMINER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte STEVEN A. DIXON and DAVID RIBBLE¹

Appeal 2017-011402
Application 13/941,161
Technology Center 3600

Before STEFAN STAICOVICI, JAMES P. CALVE, and
MICHELLE R. OSINSKI, *Administrative Patent Judges*.

OSINSKI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

¹ Liko Research & Development AB (“Appellant”) is the Applicant as provided in 37 C.F.R. § 1.46. *See* Application Data Sheet (filed Jan. 25, 2016). Appellant has identified Hill-Rom, Inc. as the assignee of the present application, and thus, the real party in interest. Appeal Br. 1. The Patent Assignment records of the USPTO, however, identify Hill-Rom Services, Inc. as the correspondent and identify Liko Research & Development AB as the assignee.

THE CLAIMED SUBJECT MATTER

Claims 1 and 16 are independent. Claims 1 and 16, reproduced below, are illustrative of the claimed subject matter on appeal.

1. A monitoring system comprising:

a person support structure configured to support a person thereon;

a person lifting system configured to lift a person to change the person's position with respect to the person support structure; and

a reporting system configured to indicate whether a lift event is compliant as a function of a change in position of a person on the person support structure, a requirement that the person be moved using the person lifting system, a caregiver's presence, and usage of the person lifting system.

16. A method of determining if a lift event is compliant, comprising the steps of:

receiving information indicative of a person's movement with respect to a person support structure;

receiving information indicative of whether the person is required to be moved using a person lift system;

receiving information indicative of a caregiver's presence when the person moved;

receiving information indicative of operational status of the person lifting system when the person moved; and

determining if a lift event is compliant as a function of the received information.

EVIDENCE

The Examiner relied on the following evidence in rejecting the claims on appeal:

Hayes	US 2013/0091631 A1	Apr. 18, 2013
NG	US 2014/0115778 A1	May 1, 2014

THE REJECTIONS

- I. Claims 16–20 stand rejected under 35 U.S.C. § 101 as being directed to patent ineligible subject matter. Non-Final Act. 3–4.
- II. Claims 1–20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over NG and Hayes. *Id.* at 6–13.

OPINION

Rejection I

An invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *E.g.*, *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court’s two-step framework, described in *Mayo* and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is “directed to.” *See Alice*, 573 U.S. at 219 (“On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk.”); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk.”).

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611);

mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as “molding rubber products” (*Diamond v. Diehr*, 450 U.S. 175, 192 (1981)); “tanning, dyeing, making waterproof cloth, vulcanizing India rubber, smelting ores” (*id.* at 184 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that “[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 176; *see also id.* at 192 (“We view respondents’ claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula.”). Having said that, the Supreme Court also indicated that a claim “seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.” *Id.* (citing *Benson* and *Flook*); *see, e.g., id.* at 187 (“It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.”).

If the claim is “directed to” an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where “we must examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-

eligible application.” *Alice*, 573 U.S. at 221 (quotation marks omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (quoting *Mayo*, 566 U.S. at 77). “[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

The PTO recently published revised guidance on the application of § 101. USPTO’s January 7, 2019 Memorandum, *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Memorandum”). Under that guidance, we first look to whether the claim recites:

- (1) 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) 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 recite additional elements to integrate that exception into a practical application, do we then look to whether the claim:

- (3) adds a specific limitation beyond the judicial exception that are 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.

See Memorandum.

The Examiner determines that the subject matter of claim 16 is directed to a “judicial exception” in that “the claim recites a method with steps that could be accomplished by human intelligence or mental processes alone.” Non-Final Act. 3. Steps that can be performed in the human mind, or by a human using pen and paper, are mental processes that are not eligible under § 101. *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2001) (holding that a method for verifying the validity of a credit card transaction over the Internet to be patent ineligible subject matter as an abstract idea capable of being performed in the human mind or by a human using pen and paper). Our reviewing court, relying on Supreme Court precedent, has “consistently ‘refused to find processes patentable when they merely claimed a mental process standing alone and untied to another category of statutory subject matter[,] even when a practical application was claimed.’” *Id.* (quoting *In re Comiskey*, 554 F.3d 967, 980 (Fed. Cir. 2009)). Mental processes or abstract intellectual concepts are not patentable. *Parker*, 437 U.S. at 589; *Benson*, 409 U.S. at 67–68.

Appellant argues that “claim 16 is directed to a computerized method that is capable of determining whether a lift event of a person lifting system is compliant” and “[a]s a consequence, claim 16 is not a mental step.” Appeal Br. 10. The Examiner responds that each of the recited steps of claim 16 indeed could be performed without the use of a computer (i.e., (1) by medical personnel “watching a patient’s movement on a person support structure”; (2) having medical personnel receive a doctor’s order; (3) having medical personnel “take note of the caregiver’s location during movement of the patient/person”; (4) by medical personnel “observing the

person lifting system being ‘in use’ when a person is being lifted or moved therewith”; and (5) having medical personnel “decide whether a lift event is compliant.”) Ans. 11–12.

We agree with the Examiner that the steps of Appellant’s method claim 16 can be performed in the human mind. Thus, we agree with the Examiner’s determination that method claim 16 is directed to a judicial exception of at least a mental process. Moreover, although we appreciate Appellant’s position that “claim 16 is directed to a computerized method” (see Appeal Br. 10), nonetheless, we find nothing of record that attributes any improvement in the functioning of a computer, or an improvement to another technology or technical field such that that the claimed invention integrates the abstract idea into a “practical application,” as that phrase is used in the Memorandum.

We have considered Appellant’s argument that “claim 16 does not attempt to monopolize an entire technical field, but is instead directed to a pointed application/embodiment” and that “because claim 16 does not impermissibly preempt the basic tools of scientific and technological work, claim 1[6] is not directed to an abstract idea” (Appeal Br. 11), but find it unpersuasive. Merely because claims do not preempt all forms of the abstraction does not make them any less abstract. *See OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362-63 (Fed. Cir. 2015) (“[T]hat the claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract.”). Moreover, characterizing preemption as a driving concern for patent eligibility is not the same as characterizing preemption as the dispositive test for patent eligibility. Although “preemption may signal

patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015).

We next consider whether the claim “appl[ies], “rel[ies] on, or use[s] 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.” *See* Memorandum; *see also Alice*, 573 U.S. at 217–18 (quoting *Mayo*, 566 U.S. at 72–73, 78) (It must be “determine[d] whether the claims at issue are directed to one of those patent ineligible concepts”—i.e., a law of nature, a natural phenomenon, or an abstract idea/judicial exception—and if so, “the elements of each claim [must be considered] both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” This part of the analysis has been described by the Supreme Court 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.’”).

Concerning this step, the Examiner determines that “the claim does not include additional elements and/or structure that are sufficient to amount to significantly more than the judicial exception because the claim recites a method with steps that could be accomplished by human intelligence or mental processes alone.” Non-Final Act. 3–4.

Appellant argues that “claim 16 adds ‘significantly more,’ because it adds a specific limitation other than what is well-understood, routine, and conventional in the field.” Appeal Br. 11. More particularly, Appellant

points to the recited steps of “receiving information indicative of[:] a person’s movement with respect to a person support structure . . . whether the person is required to be moved using a person lift system . . . a caregiver’s presence when the person is moved . . . [and] operational status of the person lifting system when the person moved” *Id.* Appellant asserts that “each of these claim elements and the claims as a whole add ‘significantly more’ than a judicial exception and are unconventional steps that confine the claim to a particular useful application.” *Id.* This argument is unpersuasive in that Appellant points only to the identified mental process steps, whereas this step is a search for an element or combination of elements that ensures that the claim is *more* than the ineligible mental process.

To the extent Appellant is arguing that the claimed mental process steps are not well understood, routine, or conventional activities known to the industry, this is not persuasive. The novelty or non-obviousness of the mental process steps does not automatically lead to the conclusion that the claimed subject matter is patent-eligible. Although the second step in the *Mayo/Alice* framework is termed a search for an “inventive concept,” the analysis is not an evaluation of novelty or non-obviousness, but rather, a search for “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.’” *Alice*, 573 U.S. at 217–18.

“Groundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry.” *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 591 (2013). A novel and non-obvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See*

Mayo, 566 U.S. at 90; *see also Diehr*, 450 U.S. at 188–89 (“The ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.”); *Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1376 (Fed. Cir. 2016) (“[U]nder the *Mayo/Alice* framework, a claim directed to a newly discovered law of nature (or natural phenomenon or abstract idea) cannot rely on the novelty of that discovery for the inventive concept necessary for patent eligibility.”); *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) (citing *Mayo*, 566 U.S. at 90) (a finding that the claims are novel and nonobvious in light of an absence of evidence does not conflict with the Examiner’s conclusion under 35 U.S.C. § 101 because “a claim for a *new* abstract idea is still an abstract idea”). However useful the mental process steps may be, their value or usefulness is not dispositive of patent eligibility. *Flook*, 437 U.S. at 594–96 (determining claims to “a new and presumably better method for calculating alarm limit values,” which were of undisputed usefulness, to be directed to patent-ineligible subject matter).

For the foregoing reasons, we find nothing in independent claim 16 to be sufficiently transformative to render claim 16 patent eligible. We sustain the Examiner’s rejection of claim 16 under 35 U.S. C. § 101 as being directed to patent-ineligible subject matter. Appellant relies on the same arguments and reasoning we found unpersuasive in connection with independent claim 16 as the basis for seeking reversal of the rejection of claims 17–20. Reply Br. 9. Accordingly, we also sustain the rejection of claims 17–20 under 35 U.S. C. § 101 as being directed to patent-ineligible subject matter.

Rejection II
Claims 1–15

The Examiner interprets the “reporting system” of independent claim 1 as a means-plus-function claim limitation because it uses “a generic placeholder ‘a reporting system’ coupled with functional language ‘configured to indicate’ without reciting sufficient structure to achieve the function.” Non-Final Act. 4. The Examiner asserts that the broadest reasonable interpretation of the claim limitation is “the corresponding structure described in the specification that achieves the claimed function, and equivalents thereof.” *Id.* at 5. The Examiner identifies the structure in the Specification for performing the claimed function as a “display or graphical user interface” or “reporting screen.” *Id.* (citing Spec. Figs. 11 (element 96), 26). The Examiner finds that “[a]n example equivalent of the reporting system could be a display or a graphical user interface” and “[a]s such, NG[’s] Light Emitting Diodes (LEDs) are present on the sling bar [60] in Figure 4 to indicate various statuses of the lift system.” *Id.* at 14. More particularly, the Examiner finds that NG teaches, *inter alia*:

a reporting system (see page 2, para [0027]: LEDs [160] are present on sling bar [60] to indicate status of the lift system) configured to indicate whether a lift event is compliant as a function of a change in position of a person on the person support structure (see Fig. 5, position change can be determined by position sensor [136]), a requirement that the person be moved using the person lifting system (see page 1, para [0016]: the existence of a “person lifting system” for this purpose implies there is or will be a requirement to move a person from “a source to a destination location”), and usage of the person lifting system.

Id. at 6–7.

In our view, the structure recited in the Specification for performing the claimed function of indicating whether a lift event is compliant as a function of (i) a change in position of a person on the person support structure, (ii) a requirement that the person be moved using the person lifting system, a caregiver's presence, and (iii) usage of the person lifting system, is more than a display or reporting screen. The Specification describes that control system 54 of lift assembly 40 includes controller 78 that in turn includes processor 90 and memory 94. Spec. 9:3–4, 10:1, 13:22–23. Processor 90 is configured to execute instructions in memory 94. *Id.* at 14:3–4. These instructions may include procedure 300 to determine when a lift event has occurred (*id.* at 14:8–9 (citing Fig. 9)) and procedure 400 to determine “when a lift should have been used, but was not used to move a patient” (*id.* at 16:9–10) (citing Fig. 10)). In the last step of procedure 400 for determining when a lift should have been used, but was not used, the Specification states that “processor 90” either “indicates that the lift event complied with the care facility’s lift protocol” or “that the lift event did not comply with the care facility’s protocol.” *Id.* at 17:9–12. Procedure 400 can be executed on person support system 14, lift system 12, or information management system 18. *Id.* at 16:10–12. Information management system 18 is configured to display information and run reports on various types of information, including reports with information regarding “the percentage of time the assigned protocols and/or hospital care protocols are complied with (i.e., the number of times a lift is used when a protocol proscribes a lift to be used). *Id.* at 21:14–16, 24:16–17. Thus, the structure disclosed for carrying out the claimed function of indicating whether a lift event is a compliant lift event includes a processor configured to execute instructions in accordance

with the flow chart (i.e., algorithm) of Figure 10. *See WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999) (“In a means-plus-function claim in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.”). The Examiner did not identify the processor and its algorithm as part of the corresponding structure disclosed in the specification for performing the recited function. Consequently, the Examiner did not identify or analyze a structure or equivalent in the prior art of NG to the processor and its algorithm.

Because the Examiner did not make the requisite findings,² the Examiner has not shown by a preponderance of the evidence that the prior art discloses a reporting system configured to indicate whether a lift event is compliant. We do not sustain the Examiner’s rejection of claim 1 or of claims 2–15 depending therefrom.

Claims 16–20

With respect to independent claim 16, the Examiner finds that NG teaches:

² The Examiner’s rejection is based on NG including equivalent structure to that described in the specification for achieving the claimed function of indicating whether a lift event is compliant as a function of a change in position of a person, a requirement that the person be moving using a person lifting system, and usage of the person lifting system. Non-Final Act. 14. The Examiner’s rejection does not address the obviousness of using a processor programmed with an algorithm to determine the compliancy of a lift event based on whether there is a change in position of the person on the person support structure, whether there is a requirement that a person be moved using a person lifting system, and whether there is usage of the person lifting system.

- a. receiving information indicative of a person's movement with respect to a person support structure (see NG, Fig. 5, position change can be determined by position sensor [136] and displayed by LEDs [160]);
- b. receiving information indicative of whether the person is required to be moved using a person lift system (see page 1, para [0016]: the existence of a "person lifting system" for this purpose implies there is or will be a requirement to move a person from "a source to a destination location");
- c. receiving information indicative of operational status of the person lifting system when the person moved (see page 2, para [0027]: LEDs [160] are present on the sling bar [60] to indicate[] status of the lift system); and
- d. determining if a lift event is compliant as a function of the received information (see page 2, para [0027] and Fig. 4, 7, 9).

Non-Final Act. 11.

The Examiner acknowledges that NG does not teach "receiving information indicative of a caregiver's presence when the person moved," but finds that Hayes teaches such a step. *Id.* at 12 (citing Hayes, Fig. 1, ¶ 25). The Examiner concludes that it would have been obvious to modify NG to "includ[e] a compatible RFID reader/tag system, such as the one discussed by Hayes, on the device of NG (which already contains a[n] RFID reader on control unit [40]) to improve safety of the device of NG and prevent unwanted movement of the patient lift without a caregiver's presence." *Id.*

As described above, claim 16 is not limited to a computerized method and encompasses a medical caregiver simply receiving certain information (e.g., visually or orally) and making a mental determination of compliancy. As explained by the Examiner, the claim never defines how the various items of received information specifically affect a determination of compliancy or non-compliancy, merely requiring that the determination of

compliance relate to the claimed information in some unspecified way. Ans. 3–4. With this in mind, the Examiner adequately explains how NG, as modified with the teachings of Hayes, results in a medical caregiver receiving the claimed information and determining the compliance of a lift as a function of the received information (Non-Final Act. 11–12; Ans. 3–10), and Appellant has not persuaded us of error in the Examiner’s findings and conclusions (Appeal Br. 3–9; Reply Br. 2–8).

Accordingly, Appellant does not apprise us of error in the Examiner’s conclusion that the combination of NG and Hayes renders obvious the subject matter of independent claim 16. We sustain the rejection of claim 16, and claims 17–20 depending therefrom, under 35 U.S.C. § 103(a) as unpatentable over NG and Hayes.

DECISION

The Examiner’s decision to reject claims 16–20 under 35 U.S.C. § 101 as being directed to patent ineligible subject matter is affirmed.

The Examiner’s decision to reject claims 1–15 under 35 U.S.C. § 103(a) as unpatentable over NG and Hayes is reversed.

The Examiner’s decision to reject claims 16–20 under 35 U.S.C. § 103(a) as unpatentable over NG and Hayes is affirmed.

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).

AFFIRMED-IN-PART