



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
13/713,962 12/13/2012 Thomas Michael Cozad JR. PINC-1-2401 8947

25315 7590 02/27/2019
LOWE GRAHAM JONES, PLLC
701 FIFTH AVENUE
SUITE 4800
SEATTLE, WA 98104

Table with 1 column: EXAMINER

RACIC, MILENA

Table with 2 columns: ART UNIT, PAPER NUMBER

3627

Table with 2 columns: NOTIFICATION DATE, DELIVERY MODE

02/27/2019

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocketing@lowegrahamjones.com
docketing-patent@lowegrahamjones.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte THOMAS MICHAEL COZAD JR.

Appeal 2017-009044
Application 13/713,962
Technology Center 3600

Before ELENI MANTIS MERCADER, JASON J. CHUNG, and
SCOTT E. BAIN, *Administrative Patent Judges*.

MANTIS MERCADER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ appeals under 35 U.S.C. § 134 from a rejection of claims 1–16, 35, 36, 38–40, 51, and 53–57. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

¹ Appellant is the real party in interest. Br. 1.

CLAIMED SUBJECT MATTER

The claims are directed to systems and methods for managing product location information. Claims 1 and 51, reproduced below, are illustrative of the claimed subject matter:

1. A method for managing product location information, the method comprising:

in a mobile computing device, receiving an indication of an initial position in a store, the indication of the initial position identifying a shelf or location that includes multiple items arranged in order from a first end of the shelf to a second end of the shelf, wherein the mobile computing device includes a user interface that includes a first control configured to indicate that a last item in a shelf has been scanned, a second control configured to indicate that a last item in a section has been scanned, and a third control configured to specify a pattern in which items on a shelf are to be scanned;

specifying, via the third control of the user interface, a pattern of scanning the multiple shelves;

receiving a series of item identifiers that each correspond to one of the multiple items, the item identifiers received from a scanner operated by a user who is traversing the shelf, in a right or left direction specified via the third control of the user interface, from the first end to the second end;

receiving an indication that the user has reached the second end of the shelf; and

in response to receiving the indication that the user has reached the second end of the shelf and without receiving any additional inputs from the user, recording store aisle location information for each of the multiple items including, for each item, an aisle identifier, a side identifier, a section identifier, a shelf identifier, and an itemization order.

51. A method for managing product location information, the method comprising:

at a scanner, managing location information about products arranged on an aisle of a store, the aisle comprising multiple sections each having multiple shelves that each have a

first and a second end, and that each include at least some of the products, wherein each shelf has an associated attached machine-readable location indicator device that encodes a location corresponding to the shelf, by:

receiving an indication of a location corresponding to a first one of the shelves, wherein the scanner is operated by a user to scan a first machine-readable location indicator device, wherein the first machine-readable location indicator device is located at a first end of the first shelf;

in response to receiving the indication of the location, preparing data structures for storing product location information;

receiving one or more indicators of products on the first shelf, the indicators received from the scanner operated by the user;

recording the received product indicators in association with location information for each of the products, based on the received location indication, the recording including automatically determining product shelf positions by maintaining a counter that is incremented as each product indicator is received; and

preparing to record product indicators for a second shelf by: receiving a rescan of the first machine-readable location indicator device, receiving a scan of a second machine-readable location indicator device that is located the second end of the first shelf, and/or receiving a scan of a third machine-readable location device indicator that is attached to a second shelf.

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Doyle	US 5,426,284	June 20, 1995
Linaker	US 8,009,864 B2	Aug. 30, 2011
Benson	US 2005/0256726 A1	Nov. 17, 2005
Chaves	US 2009/0231135 A1	Sept. 17, 2009
Liu	US 2011/0179160 A1	July 21, 2011

REJECTIONS

Claims 1–16, 35, 36, 38–40, 51, and 53–57 stand rejected under 35 U.S.C. § 101 as being directed to a judicial exception without significantly more.

Claims 1–16, 51, and 53–57 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chaves in view of Doyle and further in view of Benson.

Claims 35, 36, 38, and 39 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chaves, Doyle, and Benson and further in view of Linaker.

Claim 40 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Chaves, Doyle, Benson, Linaker, and further in view of Liu.

OPINION

Except where indicated, we adopt the Examiner's findings in the Answer and Final Office Action and we add the following primarily for emphasis. We note that if Appellant failed to present arguments on a particular rejection, we decline to review unilaterally those uncontested aspects of the rejection. *See Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential); *Hyatt v. Dudas*, 551 F.3d 1307, 1313–14 (Fed. Cir. 2008) (the Board may treat arguments Appellant failed to make for a given ground of rejection as waived).

*Claims 1–16, 35, 36, 38–40, 51, and 53–57 rejected
under 35 U.S.C. § 101*

Appellant argues that the claims are directed to an improvement of computer functionality. Br. 7. In particular Appellant argues that the claimed techniques provide for the efficient collection and synthesis of product location information via specific technical contributions, including improved user interface constructs and/or location indicator devices. *Id.* Appellant asserts that the functioning of the computing system is coupled to and reflective of the layout of the store or other location being scanned. Br. 8. Appellant argues that this improves the functioning of a computer system by naturally driving the operation of the computer system to take specific actions in response to a pattern of scans. *Id.*

Appellant further argues with respect to claims 51 and 54 that the limitation of “automatically determining item shelf positions by maintaining a counter that is incremented as each item identifier is received” or similar language, allows for a computer to perform a collection of shelf positions without any additional inputs from a user as items are scanned one after the other. Br. 8–9. According to Appellant this limitation explicitly improves the functioning of a computer system, because the computer system cannot otherwise track shelf item positions. Br. 9.

Appellant also argues that the specific combination of features of the present claims improves the prior technology of inventory management, just as *McRO*'s² claims improved animation technology. Br. 11.

Appellant further argues that the claims are not directed to a fundamental economic practice because they are not directed to finance,

² *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016).

economics, or business relationships, such as hedging or mitigating risks. *See id.* Appellant asserts that the claims are directed to computer-implemented methods, systems, and computer readable media for the efficient collection and synthesis of product location information. *Id.* Appellant argues that such techniques are not mere abstractions simply because they may involve human actions, be used in a business context, or otherwise deliver economic efficiencies. *Id.*

Appellant also argues that the claims do not pre-empt others and add significantly more to the abstract idea. Br. 12–17.

We are not persuaded by Appellant’s argument. 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) (internal quotation marks and citation omitted).

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, 191 (1981)); “tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores” (*id.* at 182 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 191 (“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 (internal citation 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* (“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* Manual of Patent Examining Procedure (MPEP) § 2106.05(a)–(c), (e)–(h) (9th Ed., Rev. 08.2017, Jan. 2018)).

Only if a claim (1) recites a judicial exception and (2) does not 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.

In the instant case, claim 1 as a whole recites a method of mental processes being performed in the mind or by a human using a pen and paper. In particular, the method of claim 1 allows recording store aisle location information for each of multiple items including, for each item, an aisle identifier, a side identifier, a section identifier, a shelf identifier, and an itemization order. This limitation, as drafted, is a process that, under its broadest reasonable interpretation, covers performance of the limitation in the mind or by a human using a pen and paper but for the recitation of generic computer components. That is, other than reciting “in a mobile computing device” at a high level of generality, nothing in the claim elements precludes the steps from being performed in the mind or by a human using a pen and paper. Furthermore, the “in a mobile computing device” language encompasses the user manually recording an aisle identifier, a side identifier, a section identifier, a shelf identifier, and an itemization order. Similarly, the steps of keeping track of the direction of the scan and the beginning and the end of a shelf constitute mental processes because it encompasses the user keeping track of the direction of the scan mentally or by using pen and paper. Thus, the claim recites mental processes.

Because the claims recite a method of a mental process under *Alice* step 1, prong 1, we proceed to *Alice* step 1, prong 2—i.e., we determine whether the method of a mental process is integrated into a practical application.

Here, the claim further recites specifying via a user interface, a pattern of scanning multiple shelves, receiving a series of item identifiers that each correspond to one of the multiple items, the item identifiers received from a scanner operated by a user who is traversing the shelf, in a right or left direction specified via a user interface, from the first end to the second end and receiving an indication that the user has reached the second end of the shelf. The claim recites

in response to receiving the indication that the user has reached the second end of the shelf and without receiving any additional inputs from the user, recording store aisle location information for each of the multiple items including, for each item, an aisle identifier, a side identifier, a section identifier, a shelf identifier, and an itemization order

(emphases added). Accordingly, the “mobile computing device” and the user interface are recited at a high level of generality, i.e., as a generic processor and user interface performing a generic computer function of processing data (receiving information regarding location of store items in a shelf). This generic processor limitation is no more than mere instructions to apply the exception using a generic computer component. The mere nominal recitation of a generic mobile computing device and the use of a GUI to enter the items into a computer listing does not take the claim limitation out of the mental processes grouping. As explained in *OIP Technologies, Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir.

2015), “relying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible.” *See also Alice*, 573 U.S. at 224 (“use of a computer to create electronic records, track multiple transactions, and issue simultaneous instructions” is not an inventive concept). “[I]nterchangeability of certain mental processes and basic digital computation . . . help explain why the use of a computer in an otherwise patent-ineligible process for no more than its most basic function . . . fails to circumvent the prohibition against patenting abstract ideas and mental processes.” *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Can. (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012). In other words, “[u]sing a computer to accelerate an ineligible mental process does not make that process patent-eligible.” *Bancorp Servs*, 687 F.3d at 1279. “Simply adding a ‘computer aided’ limitation to a claim covering an abstract concept, without more, is insufficient to render the claim patent eligible.” *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012). Accordingly, the additional elements do not integrate the abstract idea into a practical application because it does not impose any meaningful limits on practicing the abstract idea.

Claim 1 is directed to an abstract idea. Similarly independent claims 51 and 54 and dependent claims 2–16, 35, 36, 38–40, 53, and 55–57 are directed to an abstract idea for the same reasons set forth above.

Regarding Appellant’s arguments (Br. 12–17) pertaining to *Alice* step 2, we disagree. That is, Appellant’s assertion regarding pre-emption is unpersuasive, because “[w]hile preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility Where a patent’s claims are deemed only to disclose

patent ineligible subject matter under the *Mayo* framework, as they are in this case, preemption concerns are fully addressed and made moot.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015); *see also OIP*, 788 F.3d at 1362–63 (“that 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”).

Thus, we sustain the Examiner’s rejection of claim 1 and for the same reasons the Examiner’s rejection of claims 2–16, 35, 36, 38–40, 51, and 53–57.

*Claims 1–16, 35, 36, 38–40, 51, and 53–57 rejected
under 35 U.S.C. § 103(a)*

Appellant argues that the combination of Chaves in view of Doyle does not teach or suggest “automatically determining item shelf positions by maintaining a counter that is incremented as each item identifier is received,” or similar as recited in claims 51 and 54. Br. 18–19.

We do not agree. The Examiner finds, and we agree, that

Chaves teaches the object location data 120 may include multiple entries 122 (represented here in tabular form) that include location information for items, such as products on store shelves. For instance, an entry 122 may include fields or values such as an item identifier 124 (e.g., A, B or D), a location 126 (e.g., “Shelf X”), and a timestamp 128. Such information may define, for example, the last known location of a particular item at a given time, such as the last time that the RFID tag for a particular item was read by the mobile reader 102. [T]he entry 122 a for item A may indicate that item A 106 a is stored on “Shelf X,” and the timestamp 128 may indicate that the most recent scan of item A occurred at “09:29” on “2008-02-29” (i.e., 9:29 AM on Feb. 29, 2008). Notably, in an initial state, the object location data 120 does not include an entry for item C 106 c.

Ans. 11–12, citing para. 38 (emphasis omitted). Chaves also teaches the timestamp 128 scanned may be updated with more up to date scan times, for example timestamp 9:29 for entry 122b may be updated with the later scan time 17:19 and updated information may be sent to the ERP system at scheduled intervals. Ans. 12, citing paras. 41–42 and Fig. 2B–2D.

Accordingly, we agree with the Examiner’s findings that the items A, B, C, and D are incremented automatically when updates are performed. *See* Ans. 12.

Appellant further argues that neither the Figures nor the text of Benson teach or even suggest the specific user interface controls recited by claim 1, including a “third control configured to specify a pattern in which items on a shelf are to be scanned.” Br. 20. Appellant asserts that Benson is directed to a planogram *viewer* application instead of a *scanning* application, and Benson would not include controls that specify scanning patterns. *Id.*

We are not persuaded by Appellant’s argument. “[O]ne cannot show non-obviousness by attacking references individually where . . . the rejections are based on combinations of references.” *In re Keller*, 642 F.2d 413, 426 (CCPA 1981). The Examiner finds, and we agree, that Chaves teaches an output-module configured to transmit the low-level query via the mobile reader, and to output an indicia of items that respond to the low-level query (para. 12) scanning in programmable directions to the left or to the right (para. 55) and begin scanning items within a scan envelope 112 defined in part, for example, by scan directions 114a and 114b (*pattern in which items on a shelf are to be scanned*) (paras. 35, 62–63). Ans. 12–13. The Examiner then turns to Benson disclosing a display screen of a planogram viewer application depicting a graphical depiction user selected planogram

(Fig. 4–14B) wherein the store header table contains an entry for every commodity in every department of every store. Ans. 13. Each entry includes the POG and location information for the planogram identified by the POG. Ans. 13. Accordingly, the combination teaches the disputed limitation.

Appellant further argues with respect to claim 35 that “planograms . . . are not determined based on ‘a scanned identifier of one item located in the one section.’” Br. 20–21.

We do not agree. The Examiner finds, and we agree, that Linaker “scans” items using image processing techniques, the image 300 is captured by an image capture device positioned approximately at the height of the top-most shelf 302. Ans. 14, citing Figs. 2, 3.

Accordingly, we affirm the Examiner’s rejection of claim 1 and the rejections of claims of 1–16, 35, 36, 38–40, 51, and 53–57.

DECISION

We affirm the Examiner’s rejection of claims 1–16, 35, 36, 38–40, 51, and 53–57.

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