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CANTOR FITZGERALD, L.P.
110 EAST 59TH STREET (6TH FLOOR)
NEW YORK, NY 10022

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JACOB LOVELESS

Appeal 2017-009684
Application 13/832,472¹
Technology Center 3600

Before CATHERINE SHIANG, NORMAN H. BEAMER, and
MATTHEW J. McNEILL, *Administrative Patent Judges*.

SHIANG, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 2–22, which are all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

¹ Appellant identifies CFPH, LLC as the real party in interest. App. Br. 3.

STATEMENT OF THE CASE

Introduction

According to the Specification, the present invention relates to “matching and/or trading items” and more specifically, “electronic matching and/or trading of items between users.” Spec. ¶¶ 2–3. Claim 12 is exemplary:

12. A system comprising a plurality of servers including at least a first server and a second server, wherein the plurality of servers interconnected by at least one network:

wherein the first server is configured to:

maintain a first order book for an item to be traded;

receive a first order for the item, wherein the first order includes a quantity;

place the first order in the first order book, wherein the first server is responsible for controlling execution of contra-orders against the first order; and

communicate the first order on the network;

wherein the second server is configured to:

maintain a second order book for the item;

receive the first order communicated by the first server;

place the first order in the second order book;

receive a second order for the item;

determine the second order is a contra-order to the first order; and

in response to determining the second order is a contra-order to the first order, communicate the second order to the first server;

wherein the first server is further configured to:

receive the second order from the second server;

determine whether the first order is available;

when available, execute a trade between the first and second orders;

remove the first order from the first order book when the second order is for all available quantity of the first order; and

communicate a confirmation message on the network indicating the first order is traded against;

wherein the second server is further configured to:

receive the confirmation message; and
in response to receiving the confirmation message,
remove the first order from the second order book when the
second order is for all available quantity of the first order;
wherein the second server is further configured to:
receive a third order for the item, wherein the third order
includes a quantity;
place the third order in the second order book, wherein
the second server is responsible for controlling execution of
contra-orders against the third order; and
communicate the third order on the network;
wherein the first server is further configured to:
receive the third order communicated by the second
server;
place the third order in the first order book;
receive a fourth order for the item;
determine the fourth order is a contra-order to the third
order; and
in response to determining the fourth order is a contra-
order to the third order, communicate the fourth order to the
second server;
wherein the second server is further configured to:
receive the fourth order from the first server;
determine whether the third order is available;
when available, execute a trade between the third and
fourth orders;
remove the third order from the second order book when
the fourth order is for all available quantity of the third order;
and
communicate a confirmation message on the network
indicating the third order is traded against; and
wherein the first server is further configured to:
receive the confirmation message from the second server;
and
in response to receiving the confirmation message,
remove the third order from the first order book when the fourth
order is for all available quantity of the third order.

*References and Rejections*²

Claims 2–22 are rejected under 35 U.S.C. § 101 because they are directed to patent-ineligible subject matter. Final Act. 2–5.

Claims 2 and 4–22 are rejected under pre-AIA 35 U.S.C. § 102(b) as being anticipated by Lutnick (US 2010/0106636 A1; Apr. 29, 2010). Final Act. 6–19.

Claim 3 is rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Lutnick and Menon (US 2007/0019645 A1; Jan. 25, 2007). Final Act. 19–20.

ANALYSIS³

35 U.S.C. § 101

Section 101 of the Patent Act provides “[w]hoever 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. 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).

² Throughout this opinion, we refer to the (1) Final Rejection dated April 13, 2016 (“Final Act.”); (2) Appeal Brief dated March 13, 2017 (“App. Br.”); (3) Examiner’s Answer dated May 9, 2017 (“Ans.”); and (4) Reply Brief dated July 10, 2017 (“Reply Br.”).

³ Appellant raises additional arguments. Because the identified issues are dispositive of the appeal, we do not need to reach the additional arguments.

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 (1853))); 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 (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 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) (Step 2A, Prong 1); and (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)) (9th ed. 2018) (Step 2A, Prong 2).

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 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. (Step 2B).

See Memorandum at 54–56.

Turning to the *Alice* analysis, “[t]he second step of the *Alice* test is satisfied when the claim limitations ‘involve more than performance of []well-understood, routine, [and] conventional activities previously known to the industry.’” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1367 (Fed. Cir. 2018) (quoting *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1347–48 (Fed. Cir. 2014) and *Alice*, 573 U.S. at 225).

In this case, Appellant argues with respect to the *Alice* step-two analysis, “there is absolutely no evidence of record that the arrangement of elements is conventional or generic.” Reply Br. 9. “The only allegation that the Office Action makes to the contrary is that the claims perform conventional or generic. But this is not true. There is no evidence presented

by the Office Action regarding the state of the art at the time of the filing of the application.” App. Br. 8.

Because the *Berkheimer* court held “[w]hether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination” (*Berkheimer*, 881 F.3d at 1369), we agree with Appellant that the Examiner has not provided the requisite evidence. In particular, other than conclusory statements (*see, e.g.*, Ans. 24), the Examiner finds:

the examiner argued that the claims and specification failed to support a finding that the limitations were other than generic and listed the additional limitations found to be generic and provided reasoning for the finding. For example, a server or a network is a generic element. The specification, for example, describes a server, as one or more devices, whether or not a central authority. Specification, paragraph 000109. In other words, according to appellant’s specification, a server need not be a server, but can be any number of computing devices. A network is any number of points or nodes connected by communications paths. Specification, paragraph 000100.

Ans. 27. The cited two paragraphs of the Specification state:

[000100] The term “network” means a series of points or nodes interconnected by communication paths. For example, a network can include a plurality of computers or communication devices interconnected by one or more wired and/or wireless communication paths. Networks can interconnect with other networks and contain subnetworks.

[000109] In an embodiment, a server computer or centralized authority may not be necessary or desirable. For example, the present invention may, in an embodiment, be practiced on one or more devices without a central authority. In such an embodiment, any functions described herein as performed by the server computer or data described as stored on the server

computer may instead be performed by or stored on one or more such devices.

Spec. ¶¶ 100, 109.

Absent additional explanation from the Examiner, those two paragraphs of the Specification are insufficient for meeting the *Berkheimer* requirement. *See Berkheimer*, 881 F.3d at 1369. Therefore, the Examiner erred with respect to Step 2B of the Memorandum, and we are constrained by the record to reverse the Examiner's rejection of claims 2–22 on procedural grounds.

35 U.S.C. § 102

Claims 2 and 4–21

We have reviewed the Examiner's rejection in light of Appellant's contentions and the evidence of record. We concur with Appellant's contention that the Examiner erred in determining the cited portions of Lutnick disclose

A system comprising a plurality of servers including at least a first server and a second server, wherein the plurality of servers interconnected by at least one network:

wherein the first server is configured to:

maintain a first order book for an item to be traded;

receive a first order for the item, wherein the first order includes a quantity;

place the first order in the first order book, wherein the first server is responsible for controlling execution of contra-orders against the first order; and

communicate the first order on the network;

wherein the second server is configured to:

maintain a second order book for the item;

receive the first order communicated by the first server;

place the first order in the second order book;

....

wherein the second server is further configured to:
receive a third order for the item, wherein the third order
includes a quantity;
place the third order in the second order book, wherein
the second server is responsible for controlling execution of
contra-orders against the third order; and
communicate the third order on the network;
wherein the first server is further configured to:
receive the third order communicated by the second
server;
place the third order in the first order book;

as recited in claim 1.

The Examiner cites paragraphs 89, 120, 127, 278, 291, and 297 of Lutnick for teaching the above limitations. *See* Final Act. 9–11; Ans. 29. We have reviewed the cited Lutnick paragraphs, and they do not disclose the above limitations. In particular, while the cited Lutnick paragraphs discuss some claim elements generally, they do not provide sufficient details to disclose the above limitations under the strict anticipation standard. Further, the Examiner’s assertion that “a server does not need to be a server” (Ans. 29) contradicts the explicit requirement of claim 12.

Because the Examiner fails to provide sufficient evidence or explanation to support the anticipation rejection, we are constrained by the record to reverse the Examiner’s rejection of claim 12.

We also reverse the Examiner’s anticipation rejection of corresponding dependent claims 2, 4–11, and 13–21.

Claim 22

Appellant argues:

claim 22 includes a third server with specified functionality. The cited portions of Lutnick have not been shown to disclose at least a third server: that receives a first order communicated by a first server, that places the first order in its order book, that subsequently receives a confirmation message communicated by the first server (wherein the first server communicates the confirmation message as a result of executing a trade between the first order and a second order from a second server), and that in response to receiving the confirmation message, removes the first order from its order book in the manner recited by claim 22. *The mere mention of that an alternative trading system may include multiple servers is not a teaching that of a third server with this recited functionality.*

App. Br. 12 (emphasis added). The Examiner responds:

Appellant argues that Lutnick does not disclose a third server. Appeals Brief, page 12. However, Lutnick discloses that it may include any number of servers. Lutnick, paragraphs 0120, 0127. Appellant argues that this disclosure is insufficient because it does not specifically recite the number three. Page 30 Appeals Brief, page 12. However, it encompasses the number three. Appellant's specification does not provide any disclosure that supports any technological benefit for a third server. And appellant's specification specifically states that any number of computing devices may be utilized in appellant's invention.

Ans. 29–30.

We agree with Appellant that the Examiner has not adequately shown the cited Lutnick portions disclose claim 22. In particular, Lutnick's disclosure that "the trading system *may* include a plurality of computer systems" and "system **200** *may* include one or more sell side computer systems" (Lutnick ¶¶ 120, 127 (emphases added)) is insufficient for showing Lutnick discloses the recited "a third server"

that performs the required functions. *See In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1349 (Fed. Cir. 2002) (“Under the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claimed limitations, it anticipates.”) (citations omitted).

Because the Examiner fails to provide sufficient evidence or explanation to support the anticipation rejection, we are constrained by the record to reverse the Examiner’s rejection of claim 22.

Obviousness

The Examiner cites an additional reference for the obviousness rejection of claim 3. The Examiner relies on Lutnick in the same manner discussed above in the context of claim 12, and does not rely on the additional reference in any manner that remedies the deficiencies of the underlying anticipation rejection. *See Final Act.* 19–20.

Accordingly, we reverse the Examiner’s obviousness rejection of claim 3.

DECISION

We reverse the Examiner’s decision rejecting claims 2–22 under 35 U.S.C. §§ 101, 102, and 103.

REVERSED