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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHN R. ANDERSON JR., JOHN H. JANSEN,
HARRISON R. HAKES, BARRY K. GOODWIN,
NICHOLAS E. PIGGOTT, and DAVID J. RHYLANDER

Appeal 2014-008410
Application 11/731,809¹
Technology Center 3600

Before ANTON W. FETTING, KEVIN W. CHERRY, and
BRUCE T. WIEDER, *Administrative Patent Judges*.

WIEDER, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the Examiner's rejection of claims 1–13 and 16–26. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART and enter NEW GROUNDS OF REJECTION pursuant to our authority under 37 C.F.R. § 41.50(b).

¹ According to Appellants, the real party in interest is Monsanto Technology, LLC. (Appeal Br. 1.)

CLAIMED SUBJECT MATTER

Appellants' claimed invention relates to "methods and financial products that properly evaluate the risks associated with producing transgenic crops wherein the transgenic crop exhibits at least one trait as a result of having at least one transgene." (Replacement Spec. 4.)

Claims 1 and 16 are the independent claims on appeal. Claim 1 is representative. It recites (emphasis added):

1. A method of calculating a rate for a transgenic crop insurance policy purchased by a transgenic crop producer implemented on a computer programmed to calculate rates for transgenic crop insurance policies, wherein the transgenic crop comprises a trait as a result of having at least one transgene, the method comprising the steps of:

retrieving yield data by a computer from side-by-side field trials for the transgenic crop and a corresponding conventional, non-transgenic crop;

comparing the yield data for the transgenic crop to preexisting yield data for the conventional, non-transgenic crop by the computer to derive a distribution of differences between the transgenic crop yields and the conventional, non-transgenic crop yields, wherein the preexisting yield data for the conventional, non-transgenic crop is actual production history (APH) yield data or existing Risk Management Agency (RMA) yield data;

generating a risk correlation between the conventional, non-transgenic crop yields and the distribution of yield differences by the computer;

simulating a yield distribution for the transgenic crop by the computer to create a simulated yield distribution for the transgenic crop based on (a) the risk correlation, (b) the distribution of yield differences, and (c) a yield distribution for the conventional, nontransgenic crop; and

calculating the rate for the transgenic crop insurance policy based on the yield distribution for the transgenic crop,

where the insurance rate for the transgenic crop is charged to the transgenic crop producer.

REJECTIONS

Claims 1–13 and 16–26 are rejected under 35 U.S.C. § 103(a) as unpatentable over McComb (US 2006/0287896 A1, pub. Dec. 21, 2006), Green (US 2005/0125260 A1, pub. June 9, 2005), and McComb (US 2007/0174095 A1, pub. July 26, 2007).

ANALYSIS

New ground of rejection, § 112, second paragraph

Pursuant to our authority under 37 C.F.R. § 41.50(b), we enter a NEW GROUND OF REJECTION against claims 1–13 under § 112, second paragraph,² as being indefinite for failure to particularly point out and distinctly claim the subject matter which Appellants regard as the invention.

“As the statutory language of ‘particular[ity]’ and ‘distinct[ness]’ indicates, claims are required to be cast in clear – as opposed to ambiguous, vague, indefinite – terms.” *In re Packard*, 751 F.3d 1307, 1313 (Fed. Cir. 2014). “It is the applicants’ burden to precisely define the invention, not the PTO’s.” *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997).

In relevant part, claim 1 recites:

retrieving yield data by a computer from side-by-side field trials for the transgenic crop and a corresponding conventional, non-transgenic crop;

comparing the yield data for the transgenic crop to preexisting yield data for the conventional, non-transgenic crop by the computer to derive a distribution of differences between

² Now 35 U.S.C. § 112(b).

the transgenic crop yields and the conventional, non-transgenic crop yields, wherein the preexisting yield data for the conventional, non-transgenic crop is actual production history (APH) yield data or existing Risk Management Agency (RMA) yield data.

In other words, claim 1 refers to at least three different types of crop yield data: 1) retrieved yield data for the transgenic crop, 2) retrieved yield data for the conventional, non-transgenic crop, and 3) preexisting yield data for the conventional, non-transgenic crop.

In the “comparing” step, claim 1 requires comparing the retrieved yield data for the transgenic crop to preexisting yield data for the conventional, non-transgenic crop. Claim 1 then uses this comparison to derive a distribution of differences between the retrieved transgenic crop yields and “the conventional, non-transgenic crop yields.” Note that with regard to deriving the distribution of differences, claim 1 recites “the conventional, non-transgenic crop yields” and not “preexisting yield data for the conventional, non-transgenic crop.” However, it is unclear how comparing retrieved yield data for the transgenic crop to preexisting yield data for the conventional, non-transgenic crop would result in a distribution of differences between retrieved yield data for the transgenic crop and retrieved yield data for the conventional, non-transgenic crop.

If we were to construe the term “conventional, non-transgenic crop yields” as referring to the *preexisting* yield data for conventional, non-transgenic crops, the comparing step would be clearer. However, claim 1 also recites “generating a risk correlation between the conventional, non-transgenic crop yields and the distribution of yield differences by the computer,” which, by omitting the term “preexisting,” suggests that the risk

correlation is between the retrieved conventional, non-transgenic crop yields and the distribution of yield differences. Thus, it is unclear from a plain reading of the claim whether the term “conventional, non-transgenic crop yields” refers to retrieved or preexisting conventional, non-transgenic crop yield data.

To aid us in construing the claim term “conventional, non-transgenic crop yields,” we look to the Specification and Appellants’ mapping of the Specification to claim 1. (*See* Appeal Br. 5–6.) Appellants, referencing the Specification as originally filed³ (hereinafter “Spec.” or “Specification”), map the claim limitation “retrieving yield data by a computer from side-by-side field trials for the transgenic crop and a corresponding conventional, non-transgenic crop” to, *inter alia*, page 23, lines 3–21 and page 24, lines 1–8 of the Specification. (*Id.* at 5.) Additionally, Appellants map the claim limitation “generating a risk correlation between the conventional, non-transgenic crop yields and the distribution of yield differences by the computer” to, *inter alia*, page 23, lines 3–21 and page 24, lines 9–13 of the Specification. (*Id.* at 6.)

In relevant part, the Specification “define[s] y_t^{NT} to be the traditional non-traited variety yield for a given acre of corn in year t . Likewise, define y_t^{BT} as the genetically modified (traited) variety yield. Now, let $d_t = y_t^{\text{BT}} - y_t^{\text{NT}}$ be the observed difference between the traited and non-traited yields for a given side-by-side comparison in year t .” (Spec. 23, ll. 5–8.) In other words, d_t represents the difference between retrieved yield data for the

³ To avoid citation confusion, we also refer to the originally filed Specification, as cited in the Appeal Brief, rather than the replacement Specification (filed November 16, 2009). The cited portions appear in both.

transgenic crop and retrieved yield data for the conventional, non-transgenic crop. “Applied in the manner of this invention, $\rho = \text{Corr}(d_t, y_t^{\text{NT}})$ becomes a ‘risk correlation.’” (*Id.* at 23, ll. 17–18.) *This suggests that the risk correlation is calculated using retrieved, yield data for the conventional, non-transgenic crop.*

The Specification also discloses that “[c]alculation of risk correlation 11 may be performed on a computer means. . . . Data input into the computer system may include preexisting data, including yield distribution data for a corresponding conventional crop 13, APH yield data 14 for the conventional crop, and existing Risk Management Agency (RMA) rates 15 for the conventional crop.” (*Id.* at 24, ll. 9–13.) *This suggests that the risk correlation may also be calculated using preexisting, rather than retrieved, yield data for the conventional, non-transgenic crop.*

The Specification further discloses that “[s]tep 20 measures the distributional properties of the observed traited versus non-traited yield differences.” (*Id.* at 24, ll. 13–14.) This further suggests that the distributional properties are measured using the observed/retrieved non-traited yield differences. However, because this statement immediately follows the discussion of using preexisting data, it might also reasonably be construed as suggesting using preexisting non-traited yield differences. (*See id.* at 24, ll. 10–14.)

In short, the claim term “conventional, non-transgenic crop yields,” as used in claim 1, is ambiguous. Thus, claim 1 fails to particularly point out and distinctly claim the subject matter which Appellants regard as the invention. Claims 2–13 depend from claim 1. Thus, we also find that

claims 2–13 fail to particularly point out and distinctly claim the subject matter which Appellants regard as the invention.

The § 103 rejection of claims 1–13

Claim 1 recites: “comparing the yield data for the transgenic crop to preexisting yield data for the conventional, non-transgenic crop by the computer to derive a distribution of differences between the transgenic crop yields and the conventional, non-transgenic crop yields.”

Appellants argue that the “claimed method does not require yield history information for the crop to be insured,” i.e., that the claimed method does not require preexisting yield data for the transgenic crop. (See Appeal Br. 13.)

The Examiner finds that Green teaches “comparing the *preexisting* yield data for the transgenic crop to yield data for the conventional, non-transgenic crops by the computer to derive a distribution of differences between the transgenic crop yields and the conventional, non-transgenic crop yields.” (Final Action 4, emphasis added, citing Green ¶¶ 40, 41.⁴)

But paragraphs 40 and 41 of Green disclose comparing *retrieved* yield data for a crop subject to a particular best management practice (BMP) to *retrieved* yield data for a crop not subject to that BMP. Moreover, the Examiner’s finding does not make clear if the Examiner’s reference to “the conventional, non-transgenic crop yields” refers to retrieved or preexisting yield values. Even assuming that the cited portions of Green disclose

⁴ The Final Action cites to “[¶40] [¶1]” of Green. (Final Action 4, brackets in original.) However, in view of the content of paragraphs 1 and 41 of Green, we treat the reference to paragraph 1, rather than paragraph 41, as a typographical error.

comparing preexisting transgenic crop yield data to either retrieved or preexisting non-transgenic crop yield data, the Examiner does not explain how that would have made obvious the claimed comparing of retrieved transgenic yield data to preexisting non-transgenic crop yield data.

Therefore, we are persuaded that the Examiner erred in rejecting claim 1 under § 103. Claims 2–13 depend from claim 1 and the rejection relies on the same analysis we found insufficient as to claim 1. (Final Action 5–10.) Thus, we are also persuaded that the Examiner erred in rejecting claims 2–13 under § 103.

The § 103 rejection of claim 16–26

Appellants state that “[t]he rejection of claims 16–26 is not being appealed.” (Appeal Br. 2.) In the Claims Appendix of the Appeal Brief, claims 16–26 are listed as “(Cancelled).” (*Id.* at 27–28.) However, Appellants do not indicate, and the record does not reflect, an amendment to cancel claims 16–26 or that the Examiner has cancelled claims 16–26. Therefore, we treat claims 16–26 as rejected and arguments and evidence waived for purposes of the appeal with regard to claims 16–26. (*See* MPEP § 1205.02.)

New ground of rejection, § 101

Pursuant to our authority under 37 C.F.R. § 41.50(b), we enter a NEW GROUND OF REJECTION against claims 1–13 and 16–26 under 35 U.S.C § 101.

Subsequent to the filing of briefs in this appeal, the Supreme Court decided *Alice Corp. Pty Ltd. V. CLS Bank Int’l*, 134 S. Ct. 2347 (2014).

Alice applies a two-part framework, earlier set out in *Mayo Collaborative Servs. V. Prometheus Labs., Inc.*, 132 S. Ct. 1289 (2012), “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice Corp.*, 134 S. Ct. at 2355.

Under the two-part framework, it must first be determined if “the claims at issue are directed to a patent-ineligible concept.” *Id.* If the claims are determined to be directed to a patent-ineligible concept, then the second part of the framework is applied to determine if “the elements of the claim . . . contain[] an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Id.* at 2357 (citing *Mayo*, 132 S. Ct. at 1294, 1298). Therefore, we must first determine whether the claims at issue are directed to a patent-ineligible concept.

Although the Court in *Alice* did not elaborate on how it made its finding as to what the claims were directed, we find that this case’s claims themselves and the Specification provide enough information to inform one as to what they are directed.

The claimed invention relates to calculating a rate for a crop insurance policy. The steps in claim 1 include retrieving certain data, comparing the data, determining risk and a yield distribution, and calculating an insurance rate. Claim 16 contains similar language. In short, the claims are directed to collecting and analyzing information. We treat collecting information as within the realm of abstract ideas. *See Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016). Moreover, we treat “analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the

abstract-idea category.” *Id.* at 1354. Additionally, the Federal Circuit has found claims directed to a stable value insurance policy to be directed to an ineligible abstract idea. *See Bancorp Services, L.L.C. v. Sun Life Assurance Co. of Canada*, 687 F.3d 1266 (Fed. Cir. 2012). In view of the above, we conclude that the claims at issue are directed to a patent-ineligible concept.

We now apply the second part of the framework to determine if “the elements of the claim . . . contain[] an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice Corp.*, 134 S. Ct. at 2357 (citing *Mayo*, 132 S. Ct. at 1294, 1298).

The claims do not provide anything significant to differentiate the claimed process from ordinary mental steps. *See Electric Power Group*, 830 F.3d at 1355. The claims “do not require an arguably inventive set of components or methods, such as measurement devices or techniques.” *Id.* The introduction of a computer into the claims does not alter the analysis at step two.

[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea “while adding the words ‘apply it’” is not enough for patent eligibility. Nor is limiting the use of an abstract idea “to a particular technological environment.” Stating an abstract idea while adding the words “apply it with a computer” simply combines those two steps, with the same deficient result. Thus, if a patent’s recitation of a computer amounts to a mere instruction to “implemen[t]” an abstract idea “on . . . a computer,” that addition cannot impart patent eligibility. This conclusion accords with the preemption concern that undergirds our §101 jurisprudence. Given the ubiquity of computers, wholly generic computer implementation is not generally the sort of “additional featur[e]” that provides any

“practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.”

Alice Corp., 134 S. Ct. at 2358 (citations omitted).

“[T]he relevant question is whether the claims here do more than simply instruct the practitioner to implement the abstract idea . . . on a generic computer.” *Id.* at 2359. They do not. Taking the claim elements separately, the function performed by the computer at each step of the process is purely conventional and adds no inventive concept. Nor do the claims offer detail about the computer system. In short, the claim steps/limitations do no more than require a generic computer to perform generic computer functions.

Considered as an ordered combination, the computer components of Appellants’ method add nothing that is not already present when the steps are considered separately. Viewed as a whole, Appellants’ claims simply recite the concept of retrieving data and processing the data through a mathematical algorithm to calculate a rate for the crop insurance policy. The claims do not, for example, purport to improve the functioning of the computer itself. Nor do they effect an improvement in any other technology or technical field. Instead, the claims at issue amount to nothing significantly more than an instruction to apply the abstract idea of calculating a rate for a crop insurance policy using some unspecified, generic computer. That is not enough to transform an abstract idea into a patent-eligible invention. *See id.* at 2360; *see also Electric Power Group*, 830 F.3d at 1353–56.

DECISION

The Examiner's rejection of claims 1–13 under 35 U.S.C. § 103(a) is reversed.

The Examiner's rejection of claims 16–26 under 35 U.S.C. § 103(a) is summarily affirmed.

We enter a NEW GROUND OF REJECTION of claims 1–13 under 35 U.S.C. § 112, second paragraph.

We enter a NEW GROUND OF REJECTION of claims 1–13 and 16–26 under 35 U.S.C. § 101.

This decision contains NEW GROUNDS OF REJECTION pursuant to 37 C.F.R. § 41.50(b). Section 41.50(b) provides that, “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.” Section 41.50(b) further provides that Appellant, WITHIN TWO MONTHS FROM THE DATE OF THIS DECISION, must exercise one of the following two options with respect to the new grounds 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.

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

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).

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AFFIRMED-IN-PART; 37 C.F.R. § 41.50(b)