

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

TPP TECH LLC,

Plaintiff,

v.

ZEBRA TECHNOLOGIES
CORPORATION,

Defendant.

Civil Action No. 1:19-cv-00500-RGA

MEMORANDUM OPINION

Stamatios Stamoulis and Richard C. Weinblatt, STAMOULIS & WEINBLATT LLC,
Wilmington, DE; Hao Ni (argued), NI, WANG & MASSAND, PLLC, Dallas, TX.

Attorneys for Plaintiff.

Amy M. Dudash, MORGAN LEWIS & BOCKIUS LLP, Wilmington, DE; Brent A. Hawkins
(argued), MORGAN LEWIS & BOCKIUS LLP, San Francisco, CA; James J. Kritsas,
MORGAN LEWIS & BOCKIUS LLP, Chicago, IL.

Attorneys for Defendant.

August 15, 2019


ANDREWS, U.S. DISTRICT JUDGE:

Presently before me is Defendant's Motion to Dismiss Plaintiff's Complaint Pursuant to Rule 12(b)(6). (D.I. 7). The Parties have fully briefed the issues. (D.I. 8, 16, 17). I heard oral argument on June 25, 2019. (D.I. 22 ("Tr.")). I received Plaintiff's proposed claim constructions on July 2, 2019. (D.I. 21). For the reasons discussed more fully below, I will grant Defendant's motion.

I. BACKGROUND

Plaintiff filed suit against Defendant on March 13, 2019 alleging infringement of U.S. Patent Nos. 7,295,224 ("224 Patent") and 7,825,943 ("943 Patent"). (D.I. 1). The Patents relate generally to thermal printing and specifically to "compensating for the effects of thermal history on thermal print heads." ('244 Patent at 1:16-19). Independent claims 1 and 4 are the asserted claims of the '224 Patent:

1. A computer-implemented method comprising steps of:
 - (A) identifying a first print head temperature T_s of a print head in a printer;
 - (B) identifying a current ambient temperature T_r in the printer;
 - (C) identifying a modified print head temperature T_s' based on the first print head temperature T_s and at least one property selected from the group consisting of the ambient printer temperature T_r and a current relative humidity; and
 - (D) identifying an input energy to provide to a print head element in the print head based on the modified print head temperature T_s' .

4. A device comprising:
 - [A] first identification means for identifying a first print head temperature T_s of a print head in a printer;
 - [B] second identification means for identifying a current ambient temperature T_r in the printer;
 - [C] third identification means for identifying a modified print head temperature T_s' based on the first print head temperature [sic] T_s and at

least one property selected from the group consisting of the ambient printer temperature T_r and a current relative humidity; and

[D] fourth identification means for identifying an input energy to provide to a print head element in the print head based on the modified print head temperature T_s' .

('224 Patent, claims 1, 4 (bracketed capital letters added)). Claims 1, 11, and 15 are representative of the asserted claims¹ of the '943 Patent:

1. In a thermal printer including a print head element, a computer-implemented method comprising a step of:

(A) computing an input energy to provide to the print head element based on a current temperature of the print head element, a plurality of one-dimensional functions of a desired output density to be printed by the print head element, and at least one property selected from the group consisting of an ambient printer temperature and a current humidity.

11. The method of claim 1, further comprising a step of:

(B) providing the input energy to the print head element.

15. A printer comprising:

a print head element; and

first computation means for computing an input energy to provide to the print head element based on a current temperature of the print head element, a plurality of one-dimensional functions of a desired output density to be printed by the print head element, and at least one property selected from the group consisting of an ambient printer temperature and a current humidity.

('943 Patent, claim 1, 15).

II. LEGAL STANDARD

When reviewing a motion to dismiss pursuant to Rule 12(b)(6), the court must accept the complaint's factual allegations as true. *See Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 555-56

¹ Plaintiff asserts claims 1, 11-13, 15, and 25-28 of the '943 Patent. (D.I. 1 at ¶ 20). At oral argument, Plaintiff agreed that the independent claims are representative. (Tr. at 22:5-11).

(2007). Rule 8(a) requires “a short and plain statement of the claim showing that the pleader is entitled to relief.” *Id.* at 555. The factual allegations do not have to be detailed, but they must provide more than labels, conclusions, or a “formulaic recitation” of the claim elements. *Id.* (“Factual allegations must be enough to raise a right to relief above the speculative level . . . on the assumption that all the allegations in the complaint are true (even if doubtful in fact).”). Moreover, there must be sufficient factual matter to state a facially plausible claim to relief. *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009). The facial plausibility standard is satisfied when the complaint’s factual content “allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged.” *Id.* (“Where a complaint pleads facts that are merely consistent with a defendant’s liability, it stops short of the line between possibility and plausibility of entitlement to relief.” (internal quotation marks omitted)).

Patentability under 35 U.S.C. § 101 is a threshold legal issue. *Bilski*, 561 U.S. at 602. Accordingly, the § 101 inquiry is properly raised at the pleading stage if it is apparent from the face of the patent that the asserted claims are not directed to eligible subject matter. *See Cleveland Clinic Found. v. True Health Diagnostics LLC*, 859 F.3d 1352, 1360 (Fed. Cir. 2017), *cert. denied*, 138 S. Ct. 2621 (2018). This is, however, appropriate “only when there are no factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law.” *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1125 (Fed. Cir. 2018).

Section 101 of the Patent Act defines patent-eligible subject matter. It provides: “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 Supreme Court

recognizes three categories of subject matter that are not eligible for patents—laws of nature, natural phenomena, and abstract ideas. *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014). The purpose of these exceptions is to protect the “basic tools of scientific and technological work.” *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012). “[A] process is not unpatentable simply because it contains a law of nature or a mathematical algorithm,” as “an application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.” *Id.* (internal quotation marks and emphasis omitted). In order “to transform an unpatentable law of nature into a patent-eligible application of such a law, one must do more than simply state the law of nature while adding the words ‘apply it.’” *Id.* at 72 (emphasis omitted).

In *Alice*, the Supreme Court reaffirmed the framework laid out in *Mayo* “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” 573 U.S. at 217. First, the court must determine whether the claims are drawn to a patent-ineligible concept. *Id.* If the answer is yes, the court must look to “the elements of the claim both individually and as an ordered combination” to see if there is 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 (cleaned up). “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.* at 221 (cleaned up). Further, “the prohibition against patenting abstract ideas cannot be circumvented by attempting to limit the use of [the idea] to a particular technological environment.” *Id.* at 222 (alteration in original) (quoting *Bilski v. Kappos*, 561 U.S. 593, 610-11 (2010)). Thus, “the mere recitation of a generic

computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.” *Id.* at 223.

III. ANALYSIS

Defendant argues that every asserted claim is invalid as patent-ineligible under Section 101. Specifically, it argues that every asserted claim covers only the “abstract idea of collecting temperature and humidity information and using a mathematical formula.” (D.I. 8 at 5).).

A. '224 Patent

1. Alice Step 1

To determine patent eligibility under Section 101, I “must first determine whether the claims at issue are directed to a patent-ineligible concept.” *Alice Corp.*, 573 U.S. at 218. Mathematical formulas, regardless of whether they are known in the prior art, are one category of patent ineligible abstract idea. *Parker v. Flook*, 437 U.S. 584, 591 (1978). Computer implemented methods directed at collecting, analyzing, and storing data are similarly patent ineligible.

[C]ollecting information, including when limited to particular content (which does not change its character as information), [is] within the realm of abstract ideas. In a similar vein, . . . analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, [are] essentially mental processes within the abstract-idea category. And . . . merely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis.

Elec. Power Grp., LLC v. Alstom S.A., 830 F.3d 1350, 1353-54 (Fed. Cir. 2016) (citations omitted).

The claims of the '224 Patent are directed to the abstract idea of collecting information and analyzing that information using mathematical formulas. Elements A and B of claims 1 and 4 call for the collection of certain information: a first print head temperature (“T_s”) and an

ambient printer temperature (“ T_r ”). Element C requires a calculation of the modified print head temperature based the first print head temperature and either ambient printer temperature or current relative humidity. An equation disclosed in the specification for computing the modified print head temperature (“ T_s ”) is $T'_s = T_s + f_l \Delta T_r$. ('224 Patent at 12:19, 38-42). Element D then calls for a second calculation to compute the input energy necessary for a certain ink density (“ d ”). The specification discloses that an equation for calculating the input energy (“ E ”) is $E = G(d, T_{rc}) + S(d)T_h$. The definitions of variables, and methods for determining the values of constants, are further disclosed and discussed in the specification.

In sum, the asserted claims of the '224 Patent claim only collecting information and inputting that information into a series of mathematical equations to compute a value. Such data collection and mathematical computations are quintessential abstract ideas. Thus, as that type of gathering and processing numerical information is a quintessential abstract idea, I find that asserted claims 1 and 4 are directed at an abstract idea.

2. *Alice* Step 2

Under *Alice*, I next consider “the elements of each claim both individually and as an ordered combination” to see if there is 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.” 573 U.S. at 218-19 (cleaned up). An examination of claims 1 and 4 reveals that there is no inventive concept. Indeed, the claims amount to a patent on the mathematical calculation itself.

The generic equipment underlying the claims does not provide an inventive concept. Plaintiff proposes that the “identifying” steps of claim 1 should be construed as requiring temperature sensors. (D.I. 21). It also advocates that “print head element” should be construed

as “a heating element in a thermal printer that, when activated by input energy, creates a spot on the medium passing underneath it (output medium).” (*Id.*). The specification, however, describes the equipment and the general technological environment of a thermal printer as known in the art. (*See* ’224 Patent at 1:21-46 (describing thermal printers and print heads); 2:43-49 (describing temperature sensors as part of the prior art)). Limiting an abstract idea to a particular technological environment, without more, is not an inventive concept. *Alice*, 573 U.S. 222. Thus, as the asserted claims of the ’224 Patent do nothing more than limit a series of measurements and mathematical calculations to the thermal printer environment, the asserted claims do not contain an inventive concept.

I note that the method and apparatus claims are indistinguishable for the purpose of the Section 101 analysis. As in *Alice*, the asserted apparatus claim of the ’224 Patent is “no different from the method claim[] in substance.” *Id.* at 226. The method claim recites an abstract idea untethered from structure, and the apparatus claim “recite[s] a handful of generic [] components configured to implement the same idea.” *Id.*

Thus, I find that the asserted method and apparatus claims contain no inventive concept. The asserted claims of the ’224 Patent are invalid as patent ineligible under Section 101.

B. ’943 Patent

1. *Alice* Step 1

The asserted claims of the ’943 Patent suffer from the same deficiencies as the claims of the ’224 Patent. Representative claims 1 and 15 call for the computation of an input energy using a number of measured environmental variables. Defendant proposes that these claims are directed to the abstract idea of “collecting temperature and humidity information with a mathematical algorithm.” (D.I. 8 at 8). Although I agree that the claims are directed to an abstract idea, I disagree with Defendant’s characterization. Representative claims 1 and 15 do

not call for the collection of any information. Rather, they call for inputting certain information into an algorithm to calculate input energy. The claims are indifferent to the collection of the data used for the calculation. Regardless of the characterization of the claim elements, a mathematical calculation is central to the asserted claim of the '943 Patent. Thus, I find that the claims are directed to the abstract idea of calculating an input energy.

2. *Alice* Step 2

The representative claims of the '943 Patent do not contain an inventive concept. Claims 1 and 15 contain only the mathematical algorithm, a conventional computer, and a “print head element.” As I discuss above, the specification describes the print head element as conventional in the prior art. Conventional elements and generic computers do not impart a patent eligible inventive concept.

Dependent claim 11 adds the additional step of providing the calculated input energy to the print head element. Unlike the other asserted claims, this dependent claim requires a real-world use of the numerical information calculated by the independent claims. During oral argument, however, Plaintiff argued that the patentable portion of the claims relates only to the calculation of the input energy. (Tr. at 21:21-22:4 (“[C]laim 11 adds the additional element of actually . . . inputting it, but the patentable portion is the fact that you can figure out this optimal input energy based on the different elements in the claim here.”). Plaintiff did not argue, and likely could not argue, that providing the input energy to the printer was an inventive step. Regardless of Plaintiff’s position, however, claim 11 amounts to no more than stating the abstract idea and saying “apply it.” “Stating an abstract idea while adding the words ‘apply it’ is not enough for patent eligibility.” *Alice*, 573 U.S. at 223. (cleaned up). Thus, although claim 11 is distinguishable from the other claims, it does not contain an inventive concept.

The method and apparatus claims of the '943 Patent, like those in the '224 Patent, are indistinguishable for the purpose of the Section 101 analysis. As in *Alice*, the asserted apparatus claims of the '943 Patent are “no different from the method claim[] in substance.” *Id.* at 226. The method claim recites an abstract idea untethered from structure, and the apparatus claim “recite[s] a handful of generic [] components configured to implement the same idea.” *Id.*

Accordingly, I find that the asserted claims of the '943 Patent are invalid as patent ineligible under Section 101.

IV. CONCLUSION

As they are directed at an abstract idea and do not contain an inventive concept, the asserted claims of the '224 and '943 Patents are invalid as patent ineligible under Section 101.