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EXAMINER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MICHAEL GUDE

Appeal 2019-002058
Application 14/544,614
Technology Center 3600

Before STEFAN STAIKOVICI, JILL D. HILL, and LEE L. STEPINA,
Administrative Patent Judges.

HILL, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1–3, 6–9, 11, and 12². Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as the inventor, Dr. Michael Gude. Appeal Br. 1.

² Claims 4 and 5 were withdrawn from consideration. Final Act. 1, 2.

BACKGROUND

Independent claims 1, 11, and 12 are pending. Independent claim 1, reproduced below, illustrates the claimed invention:

1. A system for the encryption and decryption of data comprising a true random numbers generator of high quality using physical chance phenomena, at least one data storage medium for the key or modified key and a symmetrical encrypting method, characterized in that the key or keys being generated by the true random numbers generator and recorded o[n] the data storage medium, and by the information about the key employed for an unencrypted file I being recorded to facilitate later re-identification for decryption purposes and that the key or keys before using them in the symmetrical encryption process are modified by a known encryption method with the help of a password.

Appeal Br. 8 (Claims App.).

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Boubion	US 2010/0316219 A1	Dec. 16, 2010
Spalka	US 2012/0036368 A1	Feb. 9, 2012
Altman	US 2015/0089245 A1	Mar. 26, 2015

REJECTIONS

I. Claims 1–3, 6–9, and 11 stand rejected under 35 U.S.C. § 112(a) as failing to comply with the enablement requirement. Final Act. 2.

II. Claims 7 and 11 stand rejected under 35 U.S.C. § 112(b) as indefinite.³ Final Act. 3.

III. Claims 1–3, 6–9, and 11 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Spalka, Altman, and Boubion. Final Act. 4.

IV. Claim 12 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Spalka and Boubion. Final Act. 8.

OPINION

Rejection I – Enablement – Claims 1–3, 6–9, and 11

The Examiner finds that Appellant’s Specification “does not clearly describe how a true random numbers generator of high quality using physical chance phenomena works.” Final Act. 3. According to the Examiner, the Specification discloses “[g]enerators . . . using chance phenomena such as transistor noises, radioactive disintegration, or phase jitters of a semiconductor circuit’ but does not provide sufficient explanation on what chance phenomena functions in accordance with the random number generators to generate random numbers.” *Id.* The Examiner contends that Appellant’s Specification does not define “physical chance phenomena” and does not explain how a random number generator would “use physical chance phenomena,” and therefore a skilled artisan would not understand how to make and use the invention. *Id.*

Appellant argues claims 1–3, 6–9, and 11 as a group. Appeal Br. 2. We select claim 1 as representative. *See* 37 C.F.R. § 41.37(c)(1)(iv) (“When

³ It appears that the Examiner intended to reject both claim 7 and claim 11 as indefinite. We consider the Examiner’s arguments regarding both claims below.

multiple claims subject to the same ground of rejection are argued as a group or subgroup by appellant, the Board may select a single claim from the group or subgroup and may decide the appeal as to the ground of rejection with respect to the group or subgroup on the basis of the selected claim alone.”). Claims 2, 3, 6–9, and 11 stand or fall with claim 1.

Appellant argues that a person skilled in the art of building true random number generators would have understood how “to build it depending on physical chance phenomena.” Ans. 4. As evidence, Appellant provides five documents to support this argument, alleging that each document “show[s] how to construct a true random number generator based on physical chance phenomena.” *Id.*

The Examiner responds that the evidence provided by Appellant is for “‘physical random phenomena,’” which term “differs from the claimed “‘physical chance phenomena.’” Ans. 4–5. The Examiner continues that the term “physical chance phenomena” is not defined in Appellant’s Specification, which only mentions “chance phenomena” once, and does not indicate that the two terms should be considered equivalent. *Id.* at 5. The Examiner refuses to “make the assumption that the claimed ‘physical chance phenomena’ is the well-known ‘physical random phenomena.’” *Id.* Additionally, the Examiner argues, Appellant’s Specification “does not clearly describe how a true random numbers generator of high quality using physical chance phenomena works. *Id.* According to the Examiner, although Appellant’s Specification states that “[g]enerators that are particularly suitable for such a purpose are those using chance phenomena such as transistor noises, radioactive disintegration, or phase jitters of a semiconductor circuit,” such a statement “does not provide sufficient

explanation on what chance phenomena functions in accordance with the random number generators to generate random numbers.” *Id.* The Examiner continues that “[w]ithout these description[s] and explanations, the specification does not enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.” *Id.*

Appellant replies that “[t]he words ‘chance’ and ‘random’ are of similar meaning. Even in many dictionaries they are used as synonyms. So everybody skilled in the art will understand ‘physical chance phenomena’ identically with ‘physical random phenomena.’” Reply Br. 2. Appellant contends that a skilled artisan would have known how to build a true random numbers generator. *Id.* Appellant states that he is open to amending the claims to recite, instead of a “true random numbers generator of high quality using physical chance phenomena,” any of

- “true random numbers generator”
- “true random numbers generator of high quality”
- “true random numbers generator of high quality using physical random phenomena”
- “true random numbers generator using chance phenomena such as transistor noises, radioactive disintegration, or phase jitters of a semiconductor circuit”
- “true random numbers generator using random phenomena such as transistor noises, radioactive disintegration, or phase jitters of a semiconductor circuit”

Id.

Despite the similar meanings of the terms “chance” and “random,” it remains uncertain whether a skilled artisan would understand that the claimed “physical chance phenomena” is the same as the “physical random phenomena” disclosed in the evidentiary publications provided by

Appellant. For this reason, we sustain the Examiner's rejection. However, in the interests of compact prosecution, we note that it is in the best interests of both the Office and Appellant that the Examiner consider Appellant's proposed revisions above and, to the extent possible, communicate an appropriate revision to Appellant so that the claims can be amended to overcome the pending enablement rejection. In the alternative, it may be appropriate for the Examiner to propose an Examiner's Amendment with Appellant.

Rejection II – Indefiniteness of Claims 7 and 11

The Examiner finds that “the phrase ‘e.g.’ renders [claim 7] indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention,” and that “the phrase ‘optional step’ renders [claim 11] indefinite because it is unclear whether the limitation(s) associated with the phrase are part of the claimed invention.” Final Act. 4.

Appellant argues that claim 7 has been amended to delete the abbreviation “e.g.,” and claim 11 “is abandoned by adding a claim 13 using a sequence without the optional step and deleting the phrase ‘optional step’ in claim 11.”

On June 5, 2017, Appellant submitted a proposed amendment after the final rejection mailed April 17, 2017. Amendments filed after a final rejection are discussed in the Manual of Patent Examining Procedure (“MPEP”) § 2272 (“[A] patent owner cannot, as a matter of right, amend any finally rejected claims, add new claims after a final rejection, or reinstate previously canceled claims. For an amendment filed after final rejection and prior to the appeal brief, a showing under 37 C.F.R. § 1.116(b) is required and will be evaluated by the examiner for all proposed amendments after

final rejection except where an amendment merely cancels claims, adopts examiner's suggestions, removes issues for appeal, or in some other way requires only a cursory review by the examiner."'). Because Appellant's amendment filed June 5, 2017, was submitted after a final rejection and included new claim 13, the Examiner did not "enter" the amendment. *See* Advisory Action dated June 14, 2017. In response to the request by Appellant on July 6, 2017, that the Amendment of June 5 be entered, which included an explanation that new claim 13 was simply a copy of claim 11 with the "optional" step missing, the Examiner again refused to enter the amendment because additional claims were introduced and, thus, did not "plac[e] the application in better condition for appeal." *See* Advisory Action dated July 14, 2017.

While Appellant can request entry of an amendment filed after a final rejection, the Examiner is the one who must "enter" the amendment, and the Examiner has not "entered" the Amendment of June 5, 2017, for the reasons explained in the Advisory Actions discussed above. The result of non-entry of the June 5 Amendment is that claim 7 still includes the "e.g." language and claim 11 still includes the "(optional step)" language.

Our reviewing court has stated that an applicant "is in the best position to resolve the ambiguity in the patent claims, and it is highly desirable that patent examiners demand that applicants do so in appropriate circumstances so that the patent can be amended during prosecution rather than attempting to resolve the ambiguity in litigation." *Halliburton Energy Servs., Inc. v. M-ILLC*, 514 F.3d 1244, 1255 (Fed. Cir. 2008).

Regarding claim 7, we agree with the Examiner that the term "e.g." renders the claims indefinite, because it is unclear whether the limitation(s)

following the phrase are part of the claimed invention. We sustain the rejection of claim 7 as indefinite. Appellant has requested deletion of the term “e.g.” from claim 7 if the term renders the claim indefinite. Appellant also is “open to any phrase which is allowable.” *Id.* Thus, Appellant states, “[i]f the appeal board thinks that the phrase[] ‘e.g.’ (Claim 7) . . . is not allowable I request to delete ‘e.g.’” *Id.* Appellant notes, in the introduction to the Reply Brief, that he is representing himself *pro se*, and is requesting assistance from the Examiner in navigating to allowable claims. Reply Br. 1 (“I am and was always open to any suggestions and modifications which makes the patent application allowable.”). We again note that it is in the best interests of both the Office and Appellant that the Examiner consider Appellant’s requested revision and, to the extent possible, communicate an appropriate revision to Appellant so that the claims can be amended to overcome the pending indefiniteness rejection. In the alternative, it may be appropriate for the Examiner to propose an Examiner’s Amendment.

Appellant argues that the phrase “‘Optional Step’ in claim 11 “is fully clear to any person skilled in the art, and “just means that Claim 11 claims steps a),b),c),d),e) OR steps a),c),d),e).” Reply Br. 2.

Regarding claim 11, we agree with Appellant that a skilled artisan would understand its meaning to include “steps a),b),c),d),e) OR steps a),c),d),e).” Reply Br. 2. For this reason, we do not sustain the indefiniteness rejection of claim 11.

Rejection III – Obviousness over Spalka, Altman, and Boubion

Regarding claim 1, the Examiner finds that Spalka discloses a system for encrypting and decrypting data, the system including a random numbers generator, a data storage medium for a key or modified key, and a

symmetrical encrypting method, characterized in that: (1) the key is generated by “the random number generator and recorded on the data storage medium;” (2) “the information about the key employed for an unencrypted file [is] recorded to facilitate later re-identification for decryption purposes;” and (3) “the key [is] modified by a known encryption method before using [the key] in the symmetrical encryption process.” Final Act. 5. The Examiner further finds that, although Spalka does not disclose the random number generator being “a true random number generator of high quality using physical chance phenomena,” Altman discloses utilizing “various types of random number generators including true random number generators.” Final Act. 5 (citing Altman ¶ 17). The Examiner concludes that it would have been obvious to a skilled artisan to combine the teachings of Spalka and Altman “to utilize hardware random number generators” in Spalka’s system. *Id.* The Examiner finds that Spalka and Altman do not disclose modifying the key with “a known encryption method with the help of a password,” but finds that Boubion discloses modifying keys by a known encryption method with the help of a password. *Id.* (citing Boubion ¶¶ 80, 101). The Examiner concludes that it would have been obvious to a skilled artisan to “combine the teachings of Spalka, Altman and Boubion . . . to encrypt the keys using a password encryption method to provide security to the keys.” *Id.* at 5–6.

Appellant argues claims 1–3, 6–9, and 11 as a group. Appeal Br. 2–3. We select claim 1 as representative. *See* 37 C.F.R. § 41.37(c)(1)(iv) (“When multiple claims subject to the same ground of rejection are argued as a group or subgroup by appellant, the Board may select a single claim from the group or subgroup and may decide the appeal as to the ground of rejection

with respect to the group or subgroup on the basis of the selected claim alone.”). Claims 2, 3, 6–9, and 11 stand or fall with claim 1.

Appellant argues that claim 1 is patentable over the combination of Spalka, Altman, and Boubion because (1) “modification of the key without the help of a password’ is not intended to hide the key when [the key] is transmitted by a non secure communication line,” and (2) “the key is never decrypted in the present invention.” Appeal Br. 2, 3 (“the breakthrough of the present invention is . . . to never decrypt the key”). Appellant contends that Boubion, to the contrary, only discloses encrypting and decrypting keys that are sent over a non-secure communication line, and the key “must be decrypted at the receiver.” *Id.* at 3. Thus, Appellant argues, Boubion’s key is never used for data encryption/decryption. *Id.*

The Examiner responds that the features upon which Appellant relies to distinguish the claims from Boubion i.e., that modifying the key with a password “is not intended to hide the key when it is transmitted by a non secure communication line,” and that the “the key is never decrypted in the present invention” are not recited in Appellant’s claims. Ans. 6 (citing *In re Van Geuns*, 988 F.2d 1181 (Fed. Cir. 1993) (“limitations from the specification are not read into the claims”)). According to the Examiner, the claims only recite that the keys are “modified by a known encryption method with the help of a password” before they are used in the encryption process, and Boubion is relied on for modifying its key by a known encryption method “with the help of a password,” which phrase is “broadly and reasonable interpreted” by the Examiner as a “known method of using passwords for encrypting/decrypting keys.” *Id.* at 6–7 (citing Boubion ¶ 80 (“the one or more keys are preferably in an encrypted form, and may only be

decrypted by those with the proper decryption protocol, such as a password or other decryption mechanism”); ¶ 101 (“A password 116 or other encryption mechanism is created according to step 101 b to encrypt the key 114”).

Appellant replies that a skilled artisan would understand, from the language of claim 1, that “the password is not used in a legacy encryption process.” Reply Br. 3. Appellant states that “[i]f this is not enough I suggest the following limitations/disclaimer: - ‘ . . . help of a password. **This modification is never reversed by any decryption.**” *Id.* Appellant agrees to the addition of “[t]his phrase or a[n] allowable similar phrase” to the independent claims. *See id.*

Here, the Examiner has the better argument regarding obviousness, because claim 1 does not recite that the modified key is never reversed by decryption. We again note that it is in the best interests of both the Office and Appellant that the Examiner consider Appellant’s requested “never reversed” revision and, to the extent possible, communicate appropriate claim language that positively recites the above-noted limitation. Further, it may expedite prosecution if the Examiner assists Appellant (1) in determining allowable subject matter, to the extent such subject matter exists and is determinable by the Examiner, and (2) amending the claims in accordance with such a determination. It may alternatively be appropriate for the Examiner to propose an Examiner’s Amendment.

Rejection IV – Claim 12 Obvious over Spalka and Boubion

The Examiner finds that Spalka discloses a method for decrypting data by: (1) “[r]eading the key from the data storage medium (pp. 0092, 0096-0097);” (2) “[m]odifying the key by a known encryption method (pp.

0092-0093);” and (3) “[u]sing the modified key and the data to decrypt for a symmetrical encrypting method (pp. 0055-0059, 0093-0099, 0103, 0122-0125).” Final Act. 8–9. The Examiner finds that Spalka does not disclose modifying the key “by a known encryption method with the help of a password,” but finds that Boubion provides such disclosure. *Id.* at 9 (citing Boubion ¶¶ 80, 101). The Examiner concludes that it would have been obvious to a person of ordinary skill in the art to combine the teachings of Spalka and Boubion “to encrypt the keys using a password encryption method to provide security to the keys.” *Id.*

Appellant makes no argument that claim 12 would be patentable over Spalka and Boubion if claim 1 is not patentable over Spalka, Altman, and Boubion. Appeal Br. 3. Thus, for the reasons set forth above, we sustain Rejection IV and invite the Examiner to communicate with Appellant to negotiate claim language that overcomes the pending rejections.

CONCLUSION

The Examiner’s rejections are affirmed as to claims 1–10 and 12–19. More specifically:

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–3, 6–9, 11	112(a)	Enablement	1–3, 6–9, 11	
7, 11	112(b)	Indefiniteness	7	11
1–3, 6–9, 11	103(a)	Spalka, Altman, Boubion	1–3, 6–9, 11	
12	103(a)	Spalka, Boubion	12	
Overall Outcome			1–3, 6–9, 11, 12	

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TIME PERIOD FOR RESPONSE

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