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HUPING HU  
25 LUBBER STREET  
STONY BROOK, NY 11790

EXAMINER
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KUHLMAN, CATHERINE BURK

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* HUPING HU

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Appeal 2018-003120  
Application 11/670,996  
Technology Center 3700

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Before: CHARLES N. GREENHUT, JEFFREY A. STEPHENS, and  
ALYSSA A. FINAMORE, *Administrative Patent Judges*.

GREENHUT, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134(a) from a rejection of claims 1, 3–7, 11, 14, 18, 19, 23, 24, 32–34, 36, 37, 44 and 46. We have jurisdiction under 35 U.S.C. § 6(b). Because they are matters of examination practice that do not sufficiently relate to a specific rejection of the claims before us, we lack jurisdiction over the issues of *pro se* treatment and interview

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<sup>1</sup> Related appeals are: 2018-003398 in application 13/449,739; 2018-003401 in application 13/492,830; and 2018-007211 in application 11/944,631.

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requests. *In re Hengehold*, 440 F.2d 1395 (CCPA 1971); 37 C.F.R. § 1.181;  
*see* App. Br. 32.

We affirm.

### CLAIMED SUBJECT MATTER

The claims are directed to a method for producing quantum entanglement and non-local effects of substances. Claim 1, reproduced below, is illustrative of the claimed subject matter:

Claim 1: A method of producing a plurality of quantum entanglements between a first plurality of quantum entities in a first target and a second plurality of quantum entities in a second target, a first non-local effect of said second target on said first target through said plurality of quantum entanglements and/or a second non-local effect of said first target on said second target through said plurality of quantum entanglements which comprises the steps of:

selecting said first target which comprises a first chemical substance, water-based medium, human or animal;

selecting said second target which comprises a second chemical substance, water-based medium, human or animal;

providing a photon or magnetic pulse generating source which emits a plurality of photons or magnetic pulses as quantum entanglement generating members when said source operates;

disposing said first target between said source and said second target or said second target between said source and said first target; and

driving said source to emit said photons or magnetic pulses which interact with said first plurality of quantum entities in said first target and said second plurality of quantum entities in said second target;

whereby said plurality of quantum entanglements between said first plurality of quantum entities in said first target and said second plurality of quantum entities in said second target is generated through said interactions of said photons or magnetic pulses as said quantum entanglement generating members with said first plurality of quantum entities in said first target and said

second plurality of quantum entities in said second target; and said first non-local effect of said second target on said first target, comprising a first non-local effect of said second target on a first physical, chemical or biological property or process of said first target, and/or said second non-local effect of said first target on said second target, comprising a second non-local effect of said first target on a second physical, chemical or biological property or process of said second target, are generated through said plurality of quantum entanglements.

#### REJECTIONS

Claims 1, 3–7, 11, 14, 18, 19, 23, 24, 32–34, 36, 37, 44, and 46 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Final Act. 2.

Claims 1, 3–7, 11, 14, 18, 19, 23, 24, 32–34, 36, 37, 44, and 46 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Final Act. 5–6.

Claims 1, 3–7, 11, 14, 18, 19, 23, 24, 32–34, 36, 37, 44, and 46 stand rejected under 35 U.S.C. § 101 because the claimed invention lacks patentable utility. Final Act. 7.

Claims 14, 18, 19, 23, and 24 are provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 5–12 of copending Application No. 13/492,830.<sup>2</sup> Final Act. 11.

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<sup>2</sup> The double-patenting rejection is not contested and therefore not further addressed herein. “Once the provisional rejection has been made, there is nothing the examiner and the applicant must do until the other application issues.” *In re Mott*, 539 F. 2d 1291, 1295–96 (CCPA 1976); *see also* MPEP § 804(I).

OPINION

*Enablement under § 112, first paragraph, and utility under § 101*

For each of these rejections, Appellant argues the claims as a group (App. Br. 9–26; 33–67), for which claim 1 is representative under 37 C.F.R. § 41.37(c)(1)(iv). With regard to the questions of enablement and utility, our reviewing court has summarized:

The questions of whether a specification provides an enabling disclosure under § 112, ¶ 1, and whether an application satisfies the utility requirement of § 101 are closely related. To satisfy the enablement requirement of § 112, ¶ 1, a patent application must adequately disclose the claimed invention so as to enable a person skilled in the art to practice the invention at the time the application was filed without undue experimentation. The utility requirement of § 101 mandates that the invention be operable to achieve useful results. Thus, if the claims in an application fail to meet the utility requirement because the invention is inoperative, they also fail to meet the enablement requirement because a person skilled in the art cannot practice the invention. The how to use prong of section 112 incorporates as a matter of law the requirement of 35 U.S.C. § 101 that the specification disclose as a matter of fact a practical utility for the invention. Lack of utility is a question of fact, and the absence of enablement is a legal conclusion based on underlying factual inquiries.

*In re Swartz*, 232 F. 3d 862, 863 (Fed. Cir. 2000) (quotations and internal citations omitted); *see also* MPEP § 2164.07.

Paragraphs 9 and 11 of Appellant’s Specification summarize the invention as follows:

[Para 9] For example, using the apparatus and method developed in this invention I have discovered that applying magnetic pulses to a biological system such as the human brain when a substance such as a general anesthetic was placed in between caused the brain to feel the effect of said anesthetic for several hours after the treatment as if the test subject had actually inhaled the same.

....

[Para 11] Further, I have verified as detailed below that said biological effect was the consequence of quantum entanglement between quantum entities inside the biological system such as the human brain and those of the substance under study induced by the photons of the magnetic pulses, laser light, microwave or flashlight.

The Examiner provided a detailed analysis, citing various evidentiary sources, including, but not limited to, those submitted by Appellant, in considering the *Wands* factors (*see In re Wands*, 858 F.2d 731 (Fed. Cir. 1988); MPEP § 2164.01) as they relate to enablement, and the question of whether the claimed invention contravenes established scientific principles, as that question relates to the utility requirement. *See* Final Act. 2–5, 7–10. We agree with the Examiner’s analysis, which raised reasonable doubts as to operability of Appellant’s invention and the Specification’s compliance with the enablement requirement. Appellant’s arguments rely mainly on extrinsic sources that seem to bear little relevance to the particular subject matter in question here and patentability determinations made in other jurisdictions. The focus of this inquiry is on Appellant’s Specification. In that regard, Appellant cites, *inter alia*, paragraphs 43 and 45 of the Specification (App. Br. 18), which, along with Figure 1A, are reproduced below to summarize an embodiment of Appellant’s invention:

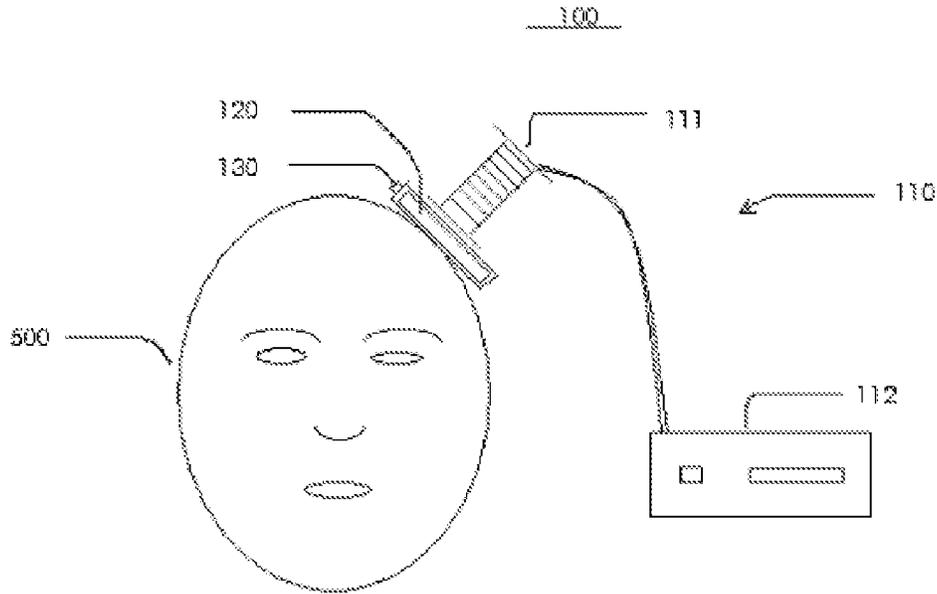


FIG. 1A

[Para 43] In one particular embodiment, the container 130 is a small glassware of the dimensions about 1"x3"x4" with a useful internal volume of about 20ml, and the source 110 is made up of a magnetic coil 111 and an audio system 112 connected to the said magnetic coil. The said small glassware has a cap which is removable so that the container can be filled or emptied. The said magnetic coil is made up of a 75-feet and 26-gauge magnetic wire coated with enamel for insulation and wound on an open-ended plastic tube of the dimensions 3" in length and 1.5" in diameter. The said audio system is a typical consumer electronic product or a combination of several consumer electronic products readily available from a consumer electronics store.

.....

[Para 45] To use the apparatus having this particular embodiment, one disposes the said apparatus 100 adjacent to a responsive target 500 such as a person's brain, and plays music on the audio system 112 with a desired output power and for a

desired length of time whereby the photons generated by the magnetic coil 111 first quantum-entangle with quantum entities inside the substance 120, then travel to the biological system 500 and subsequently entangle with the quantum entities inside the biological system 500 producing non-local effect of the substance 120 on the biological system 500 through quantum entanglement.

We have no doubt that if Appellant's invention is able to use quantum entanglement to administer a general anesthetic to the human brain by directing music toward that brain through a container of that anesthetic it would be groundbreaking and revolutionary. *See* App. Br. 32. However, due to the absence of any known scientific principles explaining how Appellant's invention could possibly operate in this manner, the absence of any cogent explanation in Appellant's Specification regarding the general principals or mechanisms causing this to occur,<sup>3</sup> and the absence of any verifiable test data reasonably attributable to the purported result, the

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<sup>3</sup> That is not to say that Appellant *must*, in all cases, explain the scientific principles governing how a device operates if they are not known. *See In re Anshausser*, 399 F.2d 275, 283 (CCPA 1968) (explaining an applicant "is not legally required to comprehend the scientific principles on which the practical effectiveness of his invention rests"). However, Appellant makes no assertion *here* that the governing principles are unknown. Rather Appellant repeatedly asserts, citing various sources of extrinsic evidence, that the principles would be readily understood by those skilled in the art (App. Br. 18, 24) even if they are misunderstood by the Examiner (App. Br. 35, 58, 65). If the principles governing the operation of Appellant's method were so readily amenable to understanding we see no reason to omit an explanation of them from Appellant's Specification and Appellant's extensive briefing. The cited articles do not fill in these gaps with specific relevance to the subject matter in question presently before us. Furthermore, the fundamental issue is not whether Appellant has explained how the claimed invention works. Rather, the requirements of utility and enablement consider whether Appellant's invention works as claimed.

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Examiner reasonably characterized Appellant's invention as being of an incredible nature. *See, e.g.*, MPEP § 2107.01(II); *see also* MPEP §§ 2107.01(III), 2107.03 (regarding asserted therapeutic or pharmacological utilities). Despite fifty-three pages of arguments and more than six-hundred pages of articles on the subject, we are not apprised of any error in the Examiner's determinations. We find no explanation as to why ordinary and conventional audio produces any meaningful quantum entanglements and, even if it did, why they would have any meaningful effects on the pharmacological interaction between an anesthetic agent and the brain. There is no explanation offered as to why spin or any other quantum property of entangled particles would bring about a pharmacological effect in a subject, particularly one mimicking the known and expected effects a substance causes via its known and typical biochemical pathways. We are also not apprised of any data logically evincing such a pharmacological interaction has actually occurred. We agree with the Examiner that heart rate changes (App. Br. 51, 62), even if present, do not amount to such evidence because heart rate changes do not necessarily demonstrate a specific pharmacological interaction. Ans. 9. The various articles cited by Appellant are either generic in nature and discuss only the possibility of quantum entanglements occurring without explaining any reason they would cause the interactions alleged in the present application, from sources regarded as having no scientific value,<sup>4</sup> or both.

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<sup>4</sup> *See, e.g.*, IN THE NORWEGIAN REGISTER FOR SCIENTIFIC JOURNALS, SERIES AND PUBLISHERS: JOURNAL OF BIOPHYSICAL CHEMISTRY, available at <https://dbh.nsd.uib.no/publiseringskanaler/KanalTidsskriftInfo.action?id=478691>; NEUROQUANTOLOGY, available at <https://dbh.nsd.uib.no/publiseringskanaler/KanalTidsskriftInfo.action?id=473508>; PROGRESS IN PHYSICS, available at

In 1931, the predecessor to our reviewing court considered a case involving a “Method and Apparatus for Accumulating and Transforming Ether Electric Energy.” The court’s reasoning there is equally applicable here:

It is fundamental in patent law that an alleged invention, to be patentable, must be not only new but useful, and that it must appear capable of doing the things claimed in order to be a device of practical utility.

The rule of doubt may only be applied in favor of an applicant where the doubt is a reasonable one, that is, one founded in reason and engendered by testing the alleged invention by known scientific laws and principles.

Neither the Patent Office tribunals nor the courts may properly grant patents upon a mere possibility that a device might do the things claimed for it, and be useful. There must be definiteness. Neither the Constitution nor the statutes contemplate the granting of patents upon theories, nor giving a monopoly upon intellectual speculations embodied in devices incapable of scientific analysis.

The question of patentable invention ordinarily must be determined by applied science, as understood by those skilled in the art to which the invention relates, and, if one presents a device which cannot be tested by any known scientific principles, he must, at least, demonstrate its workability and utility and make clear the principles upon which it operates.

No such demonstration here appears from appellant’s application, or otherwise. Three affidavits are presented of parties who claim to have seen appellant’s device in operation and who vouch for its working. These affidavits, however, are brief, general in character, and give no description of the device which affiants saw. Nor do they give any explanation which contains anything tending to clarify the terminology of the specification, or to render the device measurable by engineering principles or known natural laws.

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*In re Perrigo*, 48 F.2d 965, 966 (CCPA 1931) (citations omitted); *accord In re Ferens*, 417 F.2d 1072, 1074 (CCPA 1969) (“[W]here an applicant predicates utility for the claimed invention on allegations of the sort here which are or border on the incredible in light of contemporary knowledge of the particular art, those allegations must be substantiated by acceptable evidence.”); *In re Eltgroth*, 419 F.2d 918, 922 (CCPA 1970) (“The invention relates to the control of growth, aging and degeneration in living organisms, particularly to appellant’s alleged discovery of what appears to be a key for the solution of the problems associated with these life processes. . . . Undoubtedly, the alleged utility of control of the aging process in living organisms and the significant beneficial results flowing therefrom is adequate. Yet, there is a conspicuous absence of proof thereof.”).

For the foregoing reasons and those stated by the Examiner (Ans. 2–5, 7–9), after consideration of the evidence and arguments of record, we are not apprised of error in the Examiner’s position concerning a lack of utility under § 101 and a lack of enablement under § 112 first paragraph.

*Indefiniteness under 35 U.S.C. § 112, second paragraph*

The Examiner included two grounds for rejecting the claims under 35 U.S.C. § 112, second paragraph. The first is that the independent claims are “incomplete for omitting essential steps, such omission amounting to a gap between the steps” which “renders the claim[s] indefinite.” Final Act. 5–6 (citing MPEP § 2172.01). The second is that the independent claims are indefinite because the independent claims “recite producing non-local effects but do not specify any effects or disclose clearly how the effect is generated other than ‘through said plurality of quantum entanglements between first and second pluralities of quantum entities’.” Final Act. 6. We

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do not sustain the rejection under § 112, second paragraph on either of the grounds specified by the Examiner.

Regarding the first ground, as mentioned in the portion of the MPEP cited by the Examiner (§ 2172.01) the omission of essential elements is typically a concern addressed under the enablement requirement of the first paragraph of § 112. That same section of the MPEP also notes that the omission of essential elements may create additional issues under the second paragraph of § 112. However, although such omission might create issues under the “regards as the invention” language of § 112, second paragraph (MPEP § 2172.01<sup>5</sup>), unless there is a specific issue of claim clarity such omission, without more, relates to breadth as opposed to indefiniteness. Regarding the second ground, the Examiner quotes text that does not appear to exactly match that of any independent claim presently before us. The Examiner raises issues with regard to both grounds that appear to relate only to a lack of clarity in the operation of the device as opposed to a lack of clarity in the metes and bounds of the claimed subject matter. Although this may relate to issues of utility and enablement, as discussed above, the Examiner has not, on the record before us, demonstrated how these issues create uncertainty as to the scope of the claimed subject matter. Accordingly, we do not sustain the Examiner’s rejection under § 112, second paragraph.

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<sup>5</sup> Citing *In re Collier*, 397 F.2d 1003 (CCPA 1968) (holding the claim “fails to comply with section 112, second paragraph, in failing distinctly to claim what appellant in his brief insists is his actual invention”).

DECISION

The Examiner's rejections under § 101 and § 112, first paragraph are affirmed. The Examiner's rejection under § 112, second paragraph is reversed.

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<sup>6</sup>

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<sup>6</sup> “The affirmance of the rejection of a claim on any of the grounds specified constitutes a general affirmance of the decision of the examiner on that claim, except as to any ground specifically reversed.” 37 C.F.R. § 41.50(a).