UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/462,404	08/03/2009	Eric C. Leuthardt	GS1-0953-US	3700

80118 7590 01/16/2020

Constellation Law Group, PLLC
P.O. Box 580
Tracyton, WA 98393

EXAMINER
HARWARD, SOREN T

ART UNIT	PAPER NUMBER
1631	

NOTIFICATION DATE	DELIVERY MODE
01/16/2020	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ISFDocketInbox@intven.com
Tyler@constellationlaw.com
admin@constellationlaw.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ERIC C. LEUTHARDT, ROYCE A. LEVIEN, MARK A. MALAMUD, and LOWELL L. WOOD

Appeal 2019-000128
Application 12/462,404
Technology Center 1600

Before DONALD E. ADAMS, JOHN F. HORVATH, and KIMBERLY McGRAW, *Administrative Patent Judges*.

ADAMS, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from Examiner's decision to reject claims 77, 78, 97, 106, 110, 111, 117, 118, and 122–129 (*see* Non-Final Act.[2] 2).[3] We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

---

[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 "Gearbox, LLC," which "is wholly owned by Intellectual Ventures Management, LLC" (Appellant's May 29, 2018 Appeal Brief (Appeal Br.) 3).

[2] Examiner's December 29, 2017 Non-Final Office Action.

[3] Pending claims 96, 98–105, 107–109, and 112–116 stand withdrawn from consideration (Appeal Br. 3; *see also* Non-Final Act. 2).

STATEMENT OF THE CASE

Appellant's disclosure "relates to methods and systems for combining a bioactive agent with an artificial sensory experience" (Spec.[4] 6: 9–10). Appellant's independent claims 77, 122, and 123 are reproduced below:

77. A system, comprising:

at least one transdermal memory-dampening agent dosage device;

a virtual reality headset;

circuitry configured for accepting an indication of a schedule for administration of a memory-dampening agent to an individual;

circuitry configured for administering, at least partially via the at least one transdermal memory-dampening agent dosage device placed on a portion of the individual, *the memory-dampening agent to the individual* at least partially based on the circuitry configured for accepting an indication of a schedule for administration of a memory-dampening agent to the individual;

circuitry configured for determining a reduced memory-dampening agent effectiveness at least partially based on the schedule for administration of the memory-dampening agent to the individual, the reduced memory-dampening agent effectiveness determined at least partially based on an amount of time since administration of the memory-dampening agent;

circuitry configured for selecting an artificial sensory experience capable of at least partially compensating for reduced memory-dampening effectiveness; and

circuitry configured for presenting, via the virtual reality headset worn by the individual, the artificial sensory experience at least partially based on the circuitry

[4] Appellant's August 3, 2009 Specification.

configured for determining a reduced memory-dampening agent effectiveness.

(Appeal Br. 36 (emphasis added).)

122. A method, comprising:

providing at least one transdermal memory-dampening agent dosage device;

providing a virtual reality headset;

accepting an indication of a schedule for administration of a memory-dampening agent to an individual;

administering, at least partially via the at least one transdermal memory-dampening agent dosage device placed on a portion of the individual, *the memory-dampening agent to the individual* at least partially based on the schedule for administration of the memory-dampening agent to the individual;

determining a reduced memory-dampening agent effectiveness at least partially based on the schedule for administration of the memory-dampening agent to the individual, the reduced memory-dampening agent effectiveness determined at least partially based on an amount of time since administration of the memory-dampening agent;

selecting an artificial sensory experience capable of at least partially compensating for reduced memory-dampening effectiveness; and

presenting, via the virtual reality headset worn by the individual, the artificial sensory experience at least partially based on the determining a reduced memory-dampening agent effectiveness,

wherein at least one of the accepting, administering, determining, selecting, or presenting is at least partially implemented using at least one processing device.

(*Id.* at 41–42 (emphasis added).)

123. A system, comprising:

at least one transdermal memory-dampening agent dosage device;

a virtual reality headset;

a computing device; and

one or more instructions which, when executed by the computing device, cause the

computing device to perform one or more operations including at least:

accepting an indication of a schedule for administration of a memory-dampening agent to an individual;

administering, at least partially via the at least one transdermal memory-dampening agent dosage device placed on a portion of the individual, *the memory-dampening agent* to the individual at least partially based on the schedule for administration of the memory-dampening agent to the individual;

determining a reduced memory-dampening agent effectiveness at least partially based on the schedule for administration of the memory-dampening agent to the individual, the reduced memory-dampening agent effectiveness determined at least partially based on an amount of time since administration of the memory-dampening agent;

selecting an artificial sensory experience capable of at least partially compensating for reduced memory-dampening effectiveness; and

presenting, via the virtual reality headset worn by the individual, the artificial sensory experience at least partially based on the determining a reduced memory-dampening agent effectiveness.

(*Id.* at 42–43 (emphasis added).)

Grounds of rejection before this Panel for review:

Claims 77, 78, 97, 110, 111, 117, and 122–127 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Ko,[5] Gregg,[6] Otto,[7] and Haracz.[8]

Claims 106 and 118 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Ko, Gregg, Otto, Haracz, and Greenblatt.[9]

Claims 77, 78, 97, 110, 111, 117, 122–124, 128, and 129 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Kanios,[10] Gregg, Otto, and Haracz.

Claims 106 and 118 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Kanios, Gregg, Otto, Haracz, and Greenblatt.

ISSUE

Does the preponderance of evidence relied upon by Examiner support a conclusion of obviousness?

---

[5] Ko, US 7,198,800 B1, issued Apr. 3, 2007.
[6] Gregg et al., *Virtually reality in mental health*: *A review of the literature*, 42 Soc. Psychiatry Psychiatr. Epidermiol. 343–354 (2007).
[7] Otto et al., *Benzodiazepine Use, Cognitive Impairment, and Cognitive-Behavioral Therapy for Anxiety Disorders: Issues in the Treatment of a Patient in Need*, 66 J. Clin. Psychiatry 34–38 (2005).
[8] Haracz, US 2004/0087576 A1, published May 6, 2004.
[9] Greenblatt et al., *Benzodiazepines*: *A Summary of Pharmacokinetic Properties*, 11 Br. J. Clin. Pharmac. 11S–16S (1981).
[10] Kanios et al., US 2006/0078604 A1, published Apr. 13, 2006.

FACTUAL FINDINGS (FF)

FF 1. Ko "relates to a non-aerosol spray-on skin patch composition and methods of using it in improving wound healing, and/or administering a physiologically active ingredient to a patient. The invention also relates to a spray on skin patch drug delivery system" (Ko 1: 5–9).

FF 2. Ko discloses a

> skin patch composition . . . adapted to be sprayed onto a wound, such as for example a cut, sore, abrasion, burn or other affected part of the skin[,] . . . a spray patch skin delivery composition . . . adapted to be applied to normal skin as a means of delivering to or through the skin (transdermally) of the patient a physiologically active ingredient such as systemically active drug, or prodrug thereof . . .[, wherein,] the composition comprises at least one substantially water insoluble film forming agent, at least one film plasticiser agent, at least one water soluble compound and at least one organic solvent . . . and when combined, administered to the skin and allowed to dry the composition forming a flexible, and physiologically compatible porous, skin patch or skin covering film which degrades over time.

(Ko 4: 8–26.)

FF 3. Ko discloses

> a spray patch skin delivery composition comprising:
>
> (a) at least one substantially water insoluble film forming agent;
>
> (b) at least one film plasticiser agent;
>
> (c) at least one water soluble compound;
>
> (d) at least one organic solvent; and
>
> (e) one or more physiologically active ingredient or a pro-drug thereof;

> the composition forming a flexible, porous and physiologically compatible skin patch when sprayed onto skin and allowed to dry, and which provides transdermal drug delivery.

(Ko 3: 30–43.)

FF 4. Ko discloses the use of "clonazepam" as the physiologically active agent (Ko 8: 28; *see* Non-Final Act. 4 (Examiner finds that clonazepam is a type of benzodiazepine, which constitutes "'a memory-dampening agent'")).

FF 5. Gregg discloses that "[s]everal virtual reality (VR) applications for the understanding, assessment and treatment of mental health problems have been developed in the last 10 years" (Gregg 343: Abstract).

FF 6. Gregg discloses that

> [v]irtual reality integrates real-time computer graphics, sounds and other sensory input to create a computer generated world with which the user can interact. The virtual environment is presented not on a computer screen but through a head mounted display (HMD), typically either a helmet or goggles containing two small television screens along with stereo earphones. The user can explore and navigate in the virtual world by means of motion tracking devices attached to the HMD (and sometimes hands or feet), which enable the computer to adapt the field of view to the user's movements. A successful virtual experience provides the user with a sense of presence-as though they are physically immersed in the virtual environment. This sensation is achieved by shutting out 'real world' stimuli so that only computer-generated stimuli can be seen and heard. Some versions of the technology also provide haptic feedback via input devices like data gloves. The use of multiple sensory modalities including sound, touch and smell add a further element of reality to the experience.

(Gregg 343: Introduction.)

FF 7. Gregg discloses that treatment of patients diagnosed with Panic Disorder and Agoraphobia using either Experimental-Cognitive Therapy (ECT), a VR assisted cognitive-behavioral therapy, or Cognitive Behavioral

Therapy (CBT) with imaginal exposure, "achieved clinically significant improvements and while both ECT and CBT decreased depression, anxiety and the number of panic attacks ECT achieved this with 33% fewer sessions (8 versus 12 sessions) suggesting an economic advantage of using VR" (Gregg 349: Panic and agoraphobia; *see id.* (Gregg discloses that ECT is "a VR assisted cognitive-behavioral therapy"); *id.* (Gregg discloses that "[p]atients undergoing ECT were exposed to 8 VR sessions in which four virtual situations were presented: an elevator, a supermarket; a subway and a large open square. The number of computer-generated people (avatars) in the simulation (i.e. from none to a crowd) was manipulated by the therapist"); *id.* at 344: Introduction (Gregg discloses that "VR exposure may be used as an alternative to imaginal exposure in . . . situations meaning that patients need not rely on internal imagery or their ability to visualize").

FF 8. Otto discloses the use of CBT when discontinuing pharmacotherapy for the treatment of panic disorder and that "[b]y fading medication use in the context of CBT, patients are provided with successful experiences with exposure across internal contexts—the result is strong maintenance of treatment gains as evaluated in studies of both benzodiazepine and [selective serotonin reuptake inhibitory (SSRI)] . . . treatment" (Otto 36 (endnotes omitted); *see* Non-Final Act. 4–5; Non-Final Act. 5 (Examiner finds that "Otto teaches using CBT to 'bridge the gap' between benzodiazepine use and non-use (Otto, p. 36, mid. of col. 1), which suggests that the 'artificial sensory experience is presented when the memory-dampening agent is anticipated to be less effective'")).

FF 9. Otto discloses that

> benzodiazepine-administered participants . . . have difficulties in free recall of information presented after drug administration upon short and long delays, or recognizing this information on recognition tests, however, there is evidence that individuals develop some tolerance to the psychomotor, cognitive, and amnesic effects of benzodiazepines after several weeks of intake.

(Otto 36: Benzodiazepines and Neuropsychological Dysfunction (endnotes omitted).)

FF 10. Haracz

> provides a method of treating a behavioral disorder comprising presenting a cue associated with the disorder to a patient and administering an antimnemonic drug to the patient. This may be repeated as needed to alleviate symptoms of the disorder. The alleviation of symptoms may be measured by a clinician using standard techniques.

(Haracz ¶ 17; *see id.* ¶ 2 (Haracz "relates to treatment of behavioral disorders, particularly hypermemory disorders using antimnemonic therapy in combination with memory reactivation").

FF 11. Haracz discloses that

> [a] "cue" refers to any stimulus that can be perceived by one or more of the human senses (e.g., a visual, olfactory, aural, tactile, or gustatory stimulus). Preferably the cue is one that has some associative significance and thus triggers a particular response by the perceiving individual, such as memory reactivation in a subject with one or more hypermemory disorders. As used herein, the term "cues" includes verbal cues.

(Haracz ¶ 40.)

FF 12. Haracz discloses that

> Hypermemory disorders include, without limitation, addictions, e.g., to drugs (such as, cocaine, nicotine, Cannabis, opiates and opiate derivatives, and the like), alcohol, gambling, food, sex,

> thrill-seeking, computer technology, etc.; obsessive-compulsive disorder; Tourette's Syndrome; post-traumatic stress disorder (PTSD); bipolar disorder; depression; schizophrenia; anxiety disorders, including panic and phobias; personality disorders, including antisocial personality disorder; and other disorders involving troubling memories. For the purposes of the present invention, the "worried well" (i.e., people who seek therapy despite not having a specific neuropsychiatric diagnosis) are also considered to suffer from hypermemory disorders. Individuals would also be considered to suffer from a hypermemory disorder if they complain of maladaptive lifestyles dominated by troubling memories. The above disorders are considered hypermemory disorders even if the patient and/or a clinician evaluating and treating the patient are unaware of specific memories that are associated with the disorder.

(Haracz ¶ 43.)

FF 13. Kanios

> provide[s] a transdermal system, which is simple and inexpensive to manufacture. The present invention provides a transdermal drug delivery system for the topical application of one or more active agents contained in one or more polymeric and/or adhesive carrier layers, proximate to a non-drug containing polymeric backing layer which is manufactured to optimize drug loading while providing desirable adhesion to skin or mucosa as well as providing modulation of the drug delivery and profile. The polymeric backing layer is designed to provide control of permeation rate, onset and profile of the active agent from the system.

(Kanios ¶ 21.)

FF 14. Kanios discloses that its "transdermal delivery device may comprise at least one layer formed of a single polymer or a blend of polymers to serve as a pressure-sensitive adhesive composition for applying the system to the dermis" (Kanios ¶ 22).

FF 15. Kanios discloses

> compositions and methods of controlling drug delivery rates, onset and profiles of at least one active agent in a transdermal delivery system, comprising selecting a specific a non-drug containing polymeric backing layer having specific physical and/or chemical characteristics. The drug carrier composition may be comprised of (a) one or more acrylic-based polymers having one or more functionality or (b) one or more silicone-based polymers having one or more silanol contents (capping) and/or resin to polymer ratios, alone or in combination, and are present in proportions to provide a desired solubility for the drug. By selectively tailoring the moisture vapor transmission rate of the backing layer, drug delivery, onset and profiles can be achieved.

(Kanios ¶ 23.)

FF 16. Kanios discloses that its active agent may be clonazepam (*see* Kanios ¶ 105; *see* Non-Final Act. 8 (Examiner finds that clonazepam "constitutes 'a memory-dampening agent'").

FF 17. Examiner finds that Ko or Kanios in combination with Gregg, Otto and Haracz do "not teach 'drug concentration versus time' information or 'rate of metabolism' information" (Non-Final Act. 7 and 11).

FF 18. Examiner finds that "Greenblatt teaches that pharmacokinetics of a benzodiazepine are expressed as plasma concentration-versus-time curves" and "that the half-life of benzodiazepines depends on the rate of metabolism of the drug and its metabolites" (Non-Final Act. 6 (citing Greenblatt 12S–14S and Figures 1–3)).

ANALYSIS

The rejection of independent claims 77 and 123 and dependent claims 78, 97, 110, 111, 117, and 124–129 over Ko or Kanios in combination with Gregg, Otto, and Haracz:

Based on Ko or Kanios in combination with Gregg, Otto, and Haracz, Examiner concludes that, at the time Appellant's invention was made, it would have been prima facie obvious "to use a virtual reality system to provide VR-CBT, as taught by Gregg, to assist with benzodiazepine taper, as taught by Otto, because Haracz teaches that panic disorders can be effectively treated by combining audiovisual cues with treatment by memory-dampening agents" (Non-Final Act. 6 and 10; Ans.[11] 3–6). In this regard, Examiner reasons that because Haracz discloses that the foregoing "treatment approach is amenable to using many types of audiovisual cues" and "Gregg teaches that virtual reality can be used to treat many different types of psychiatric disorders," a person of ordinary skill in this art "would have readily predicted that the combination would successfully result in a system that uses VR-CBT [(virtual reality-cognitive based therapy)] to assist with benzodiazepine taper" (Non-Final Act. 6 and 10–11).

In addition, Examiner finds that it would have been prima facie obvious, at the time of Appellant's claimed invention to "use the transdermal drug delivery device of Ko to deliver the benzodiazepine dose in the system of Gregg, Otto and Haracz, because Ko teaches that transdermal drug delivery is convenient and allows for controlled dosages of the administered drugs" (Non-Final Act. 6 and 11). Thus, Examiner reasons,

[11] Examiner's June 29, 2018 Answer.

> [g]iven that Ko teaches that the device can deliver clonazepam, a type of benzodiazepine or memory-dampening agent, and that the system of Gregg, Otto and Haracz does not depend on any particular delivery route for the benzodiazepine, said practitioner would have readily predicted that the combination would successfully result in a system that uses VR-CBT and controlled transdermal administration of benzodiazepine to administer tapering doses of benzodiazepine.

(Non-Final Act. 6–7 and 11.)

Claim 77:

The system of Appellant's independent claim 77, reproduced above, requires, *inter alia*,

> circuitry configured for administering, at least partially via the at least one transdermal memory-dampening agent dosage device placed on a portion of the individual, the memory-dampening agent to the individual at least partially based on the circuitry configured for accepting an indication of a schedule for administration of a memory-dampening agent to the individual;
>
> [and]
>
> circuitry configured for determining a reduced memory-dampening agent effectiveness at least partially based on the schedule for administration of the memory-dampening agent to the individual, the reduced memory-dampening agent effectiveness determined at least partially based on an amount of time since administration of the memory-dampening agent.

(*see* Appeal Br. 36.) Appellant's claims 78, 97, 110, 111, 117, and 124–129 depend directly or indirectly from Appellant's independent claim 77 (*see id.* at 36–41, 43, and 44).

We recognize Examiner's assertion that "Gregg and Haracz both teach using electronics to implement their systems, which suggests using

'circuitry' to implement any or all of the system functions" (Non-Final Act. 5 and 8–9). Examiner, however, fails to direct our attention to any portion of Gregg or Haracz that supports Examiner's assertion. *See CFMT, Inc. v. Yieldup Int'l Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing *In re Royka*, 490 F.2d 981, 985 (CCPA 1974) ("[O]bviousness requires a suggestion of all limitations in a claim."). "[E]xaminer bears the initial burden, on review of the prior art or on any other ground, of presenting a prima facie case of unpatentability." *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). In addition, we note that "rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Examiner has not provided a sufficient evidentiary basis to support a finding that Gregg or Haracz teach "circuitry configured for administering . . . the memory-dampening agent to the individual" and "circuitry configured for determining a reduced memory-dampening agent effectiveness" as recited in claim 77. *See* Final Action 5, 8–9 (citing Gregg, 343, 349; Haracz ¶¶ 17, 40, 43); Ans. 3–5. Nor does Examiner rely upon Ko, Kanios, or Otto as teaching the recited circuitry.

Therefore, on this record, we find that Examiner failed to establish an evidentiary basis to support a conclusion that Ko or Kanios in combination with Gregg, Otto, and Haracz teach or suggest a system that comprises circuitry configured to administer a memory-dampening agent to an individual or circuitry configured to determining a reduced memory-dampening agent effectiveness" as required by Appellant's claim 77 (*cf.* Non-Final Act. 4–7 and 8–11; FF 1–16; Ans. 3–6). As such, we reverse the

rejections of claim 77 over Ko or Kanios in combination with Gregg, Otto, and Haracz.

Additionally we reverse the rejection of 78, 97, 110, 111, 117, and 124–129 over Ko or Kanios in combination with Gregg, Otto, and Haracz which depend, directly or indirectly, from claim 77. *See In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988) ("Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.").

Claim 123:

The system of Appellant's independent claim 123, reproduced above, requires, *inter alia*,

> a computing device; and
>
> one or more instructions which, when executed by the computing device, cause the
>
> > computing device to perform one or more operations including at least:
> >
> > > accepting an indication of a schedule for administration of a memory-dampening agent to an individual;
> > >
> > > administering, at least partially via the at least one transdermal memory-dampening agent dosage device placed on a portion of the individual, the memory-dampening agent to the individual at least partially based on the schedule for administration of the memory-dampening agent to the individual;
>
> [and]
>
> > > determining a reduced memory-dampening agent effectiveness at least partially based on the schedule for administration of the memory-dampening agent to the individual, the reduced memory-dampening agent effectiveness determined at least partially based on an

> amount of time since administration of the memory-dampening agent.

(*See* Appeal Br. 42–43.)

Examiner has not sufficiently identified where the cited prior art teaches a "computing device" or "instructions which, when executed by the computing device" cause the computing device to perform the operations recited in claim 123. *See* Non-Final Act. 4–7 and 8–11; Ans. 3–5). Accordingly, on this record, Examiner failed to establish an evidentiary basis to support a conclusion that Ko or Kanios in combination with Gregg, Otto, and Haracz teach or suggest a system that comprises a computing device to perform one or more operations that include administering a memory-dampening agent to an individual, via a transdermal device, as required by Appellant's claim 123 (*cf.* Non-Final Act. 4–7 and 8–11; FF 1–16; Ans.[12] 3–5). In addition, as Appellant explains, Examiner failed to establish an evidentiary basis on this record to support a conclusion that Ko or Kanios, in combination with Gregg, Otto, and Haracz teach or suggest a system that comprises a computing device to perform one or more operations that include determining a reduced memory-dampening agent's effectiveness, as required by Appellant's claim 123 (*see* Appeal Br. 11–17, 21–23 and 33; *cf.* Non-Final Act. 4–7 and 8–11; FF 1–16; Ans. 3–5). Therefore, we reverse Examiner's rejections of claim 123 over Ko or Kanios in combination with Gregg, Otto, and Haracz.

[12] Examiner's June 29, 2018 Answer.

The Rejection of Independent Claim 122 over Ko or Kanios in combination with Gregg, Otto, and Haracz:

Appellant's independent method claim 122 is reproduced above. Appellant traverses the rejection of its claim 122 for the same reasons set forth with respect to Appellant's system claim 77 (*see* Appeal Br. 33). However, unlike system claim 77, method claim 122 does not require circuitry for administering a memory-damping agent or for determining a reduced memory-damping agent effectiveness.

Ko or Kanios in combination with Gregg, Otto, and Haracz suggest a method comprising at least one transdermal memory-dampening agent dosage device (*see* FF 1–4 and 13–16; *cf.* Appeal Br. 12 ("Appellant does not necessarily concur, but assumes for argument here" that Ko's "'systemically active drug'" is a "'memory-dampening agent'" within the scope of Appellant's claimed invention); Appeal Br. 22–23 ("Appellant does not necessarily concur, but assumes for argument here" that Kanios' "'Clonazepam'" is a "'memory-dampening agent'" within the scope of Appellant's claimed invention)).

The use of a transdermal device to administer a memory-dampening agent implies that a schedule for administration to an individual was indicated and accepted. In addition, Otto discloses a method of tapering memory-dampening agent when discontinuing pharmacotherapy, which again suggests the indication and acceptance of a therapeutic schedule (*see* FF 8). At the time of Appellant's claimed invention, those of ordinary skill in this art would have recognized that an appropriate therapeutic schedule includes a determination of an administration schedule that is at least based on an amount of time since administration of the memory-dampening agent,

as required by the method of Appellant's claim 122. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (It is proper to "take account of the inferences and creative steps that a person of ordinary skill in the art would employ."); *see also id.* at 421 ("A person of ordinary skill is also a person of ordinary creativity, not an automaton."). Thus, Ko or Kanios in combination with Gregg, Otto, and Haracz suggest a method of administering a memory-dampening agent to an individual, at least partially via a transdermal memory-dampening agent dosage device, at least partially based on a schedule for administration of the memory-dampening agent to the individual as required by Appellant's claim 122.

Gregg discloses the therapeutic use of a virtual reality headset to provide a sensory experience selected to treat a patient (*see* FF 5–7; *see also* Haracz (suggesting the use of a cue "that has some associative significance and thus triggers a particular response by the perceiving individual, such as memory reactivation in a subject with one or more hypermemory disorders")). Thus, Ko or Kanios in combination with Gregg, Otto, and Haracz suggest a method comprising a virtual reality headset to produce an artificial sensory experience selected to treat a patient (*see* FF 5–9).

Otto discloses the use of virtual reality when discontinuing pharmacotherapy (*see* FF 8). Thus, Ko or Kanios in combination with Gregg, Otto, and Haracz suggest a method wherein an artificial sensory experience capable of at least partially compensating for reduced memory-dampening effectiveness is selected and presented via a virtual reality headset worn by an individual at least partially based on the determining of a reduced memory-dampening agent effectiveness as required by Appellant's claim 122.

Gregg further discloses that "[v]irtual reality integrates real-time computer graphics, sounds and other sensory input to create a computer generated world with which the user can interact" (FF 6). Thus, Ko or Kanios in combination with Gregg, Otto, and Haracz suggest a method, wherein at least one of selecting or presenting is at least partially implemented using at least one processing device, as required by Appellant's claim 122.

For the foregoing reasons, we find no error in Examiner's conclusion that Ko or Kanios in combination with Gregg, Otto, and Haracz makes obvious the method of Appellant's claim 122 (*see* FF 1–16; *see also* Non-Final Act. 4–7 and 8–11; *cf.* Appeal Br. 41–42).

As noted above, the method of Appellant's claim 122 does not require circuitry to determine a reduced memory-dampening agent effectiveness at least partially based on a schedule for administration of the memory-dampening agent to an individual (*see* Appeal Br. 41–42). Therefore, we are not persuaded by Appellant's contentions regarding Examiner's failure to show the prior art teaches or suggests this type of circuitry (*see* Appeal Br. 12–16 and 22–23).

For the reasons set forth above, we are not persuaded by Appellant's contentions regarding the determination of reduced memory-dampening agent effectiveness based, at least partially, on the amount of time since the memory-dampening agent was administered (*see* Appeal Br. 17). *See KSR*, 550 U.S. at 418 and 421.

We recognize that "Appellant herein provides attorney argument to contest the USPTO's assertions" (Appeal Br. 7). "Attorney's argument in a brief cannot take the place of evidence." *In re Pearson*, 494 F.2d 1399,

1405 (CCPA 1974). Therefore, we are not persuaded by the contention of Appellant's counsel

> that "Tapering benzodiazepine dosages," as referenced by the USPTO, may suggest that a lesser dosage of a drug at a later time (i.e. a taper) can mean that the drug is less efficacious at the later time than the greater dosage of the drug at the earlier time. A taper usually implies a lower dose over time pursuant to some framework in time but this is not always necessarily the case. Appellant respectfully notes that it is well known that there may in fact be no relation between a reduced dosage, the amount of time between dosages and efficacy of the drug.

(Appeal Br. 18; *see id.* at 18–19.)

The rejection of claims 106 and 118 over Ko or Kanios in combination with Gregg, Otto, Haracz, and Greenblatt:

Based on the combination of Ko, Gregg, Otto, Haracz, and Greenblatt, Examiner concludes that, at the time Appellant's invention was made, it would have been prima facie obvious "to combine the pharmacokinetic information about benzodiazepines, as taught by Greenblatt, with the system of Ko, Gregg, Otto and Haracz, because Greenblatt teaches that information about the pharmacokinetics of benzodiazepines is important for understanding their efficacy over time" (Non-Final Act. 8 and 12). In this regard, Examiner reasons that because "both Greenblatt and the combination of Ko, Gregg, Otto and Haracz are directed to controlling the efficacy of benzodiazepines over time, said practitioner would have readily predicted that the combination would successfully result in a system that controls a benzodiazepine taper using pharmacokinetic information about the benzodiazepine" (Non-Final Act. 8 and 12).

Appellant's claims 106 and 118 depend from Appellant's independent claim 77. Examiner finds that Ko or Kanios in combination with Gregg, Otto, and Haracz do "not teach 'drug concentration versus time' information or 'rate of metabolism' information" and relies on Greenblatt to make up for this deficiency (FF 17–18). Examiner does not rely upon Greenblatt to make up the deficiencies set forth above with respect to claim 77. According, Examiner, fails to establish an evidentiary basis on this record to support a conclusion that Greenblatt makes up for the deficiency in the combination of Ko or Kanios in combination with Gregg, Otto, and Haracz discussed above with respect to Appellant's independent claim 77. Therefore, we reverse Examiner's rejection of claims 106 and 108.

CONCLUSION

The preponderance of evidence relied upon by Examiner supports a conclusion of obviousness with respect to claim 122.

The rejection of claim 122 under 35 U.S.C. § 103(a) as unpatentable over the combination of Ko, Gregg, Otto, and Haracz is affirmed.

The rejection of claim 122 under 35 U.S.C. § 103(a) as unpatentable over the combination of Kanios, Gregg, Otto, and Haracz is affirmed.

The preponderance of evidence relied upon by Examiner fails to support a conclusion of obviousness with respect to claims 77, 78, 97, 106, 110, 111, 117, 118, and 123–127.

The rejection of claims 77, 78, 97, 110, 111, 117, and 123–127 under 35 U.S.C. § 103(a) as unpatentable over the combination of Ko, Gregg, Otto, and Haracz is reversed.

The rejection of claims 106 and 118 under 35 U.S.C. § 103(a) as unpatentable over the combination of Ko, Gregg, Otto, Haracz, and Greenblatt is reversed.

The rejection of claims 77, 78, 97, 110, 111, 117, 122–124, 128, and 129 under 35 U.S.C. § 103(a) as unpatentable over the combination of Kanios, Gregg, Otto, and Haracz is reversed.

The rejection of claims 106 and 118 under 35 U.S.C. § 103(a) as unpatentable over the combination of Kanios, Gregg, Otto, Haracz, and Greenblatt is reversed.

DECISION SUMMARY

In summary:

Claims Rejected	**35 U.S.C. §**	**Reference(s)/Basis**	**Affirmed**	**Reversed**
77, 78, 97, 110, 111, 117, 122–127	103	Ko, Gregg, Otto, Haracz	122	77, 78, 97, 110, 111, 117, 123–127
106, 118	103	Ko, Gregg, Otto, Haracz, Greenblatt		106, 118
77, 78, 97, 110, 111, 117, 122–124, 128, 129	103	Kanios, Gregg, Otto, Haracz	122	77, 78, 97, 110, 111, 117, 123–127
106, 118	103	Kanios, Gregg, Otto, Haracz, Greenblatt		106, 118
Overall Outcome			122	77, 78, 97, 106, 110, 111, 117, 118, 123–127

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)(1)(iv).

AFFIRMED-IN-PART