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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KIM LISA COLEMAN BOONE, DAVID ALAN BOONE, ADAM ARABIAN, and MICHAEL ORENDURFF

Appeal 2015-002712
Application 13/276,949
Technology Center 2600

Before ST. JOHN COURTENAY III, THU A. DANG, and LARRY J. HUME, *Administrative Patent Judges*.

DANG, *Administrative Patent Judge*.

DECISION ON APPEAL

I. STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from a final rejection of claims 1–34. Appellants have withdrawn claims 33 and 34. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

A. INVENTION

According to Appellants, the disclosed and claimed invention relates to a fall risk assessment device and method. Title.

B. ILLUSTRATIVE CLAIM

Claim 1 is exemplary:

> 1. A method for assessing the risk of a patient to fall, comprising:
>
> attaching a pedometer on a patient, wherein the pedometer includes one or more sensors;
>
> allowing the patient to engage in activities throughout a predetermined period of time in, at least, an environment the patient occupies for a majority of the day while the pedometer senses information relating to steps taken by the patient;
>
> measuring acceleration of a patient and counting a step when acceleration is within a predetermined range for a predetermined time;
>
> recording information when a step is counted;
>
> with one or more computers, calculating at least one step variable from the information of a counted step;

with one or more computers, comparing the at least one calculated step variable to a model step variable; and
with one or more computers, providing an assessment of the risk of the patient to fall.

C. REJECTIONS

The prior art relied upon by the Examiner as evidence in rejecting the claims on appeal is:

Smith	US 5,485,402	Jan. 16, 1996
Takenaka	US 6,064,167	May 16, 2000
Aminian	US 2005/0010139	Feb. 7, 2012
Hausdorff	US 2012/0101411 Al	Apr. 26, 2012

Claims 1–5, 7–18, 20–25, 27 and 29–32 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over the combination of Smith and Hausdorff.[1]

[1] In the event of further prosecution, we leave it to the Examiner to consider if the claims should also be rejected under 35 U.S.C. § 101. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1371 (Fed. Cir. 2011) (holding that a method for verifying the validity of a credit card transaction over the Internet to be nonstatutory as an abstract idea capable of being performed in the human mind or by a human using a pen and paper). We further refer to *Digitech*, where the Federal Circuit has provided additional guidance on the issue of statutory subject matter by holding claims to a process of organizing information through mathematical correlations was not tied to a specific structure or machine, and was thus an abstract idea and ineligible under § 101. *Digitech Image Tech., LLC v. Electr. for Imaging, Inc.*, 758 F.3d 1344 (Fed. Cir. 2014), *aff'd.* Abstract ideas have been identified by the courts by way of example, including fundamental economic practices, certain methods of organizing human activities, an idea 'of itself,' and mathematical relationships/formulas. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355–56 (2014). In *Alice*, the Supreme Court guides: "the mere recitation of a generic computer

Claims 6, 19 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Smith, Hausdorff and Aminian.

Claim 26 stands rejected under § 35 U.S.C. § 103(a) as being unpatentable over the combination of Smith, Hausdorff, and Takenaka.

II. ISSUE

The principle issue before us is whether the Examiner erred in finding the combination of Smith and Hausdorff teaches or would have suggested "calculating at least one *step variable* from the information of a counted step" and "providing an *assessment of the risk* of the patient to fall." (claim 1, emphasis added).

III. FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

Smith

1. Smith discloses a pedometer with a sensor for sensing movement of the monitor relative to the environment of the wearer. (Col. 1, 62 – Col. 2, 12).

2. Smith's sensor provides the acceleration signal to a step determination unit which determines whether the wearer has taken a step. The step determination unit counts steps and interfaces with an acceleration data unit. (Col. 4, 3–16).

Hausdorff

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cannot transform a patent-ineligible abstract idea into a patent-eligible invention." *Id.* at 2358.

3. Hausdorff discloses a method of gait data collection and determines a movement data parameter from this data, which is used in predicting a near-fall if the movement parameter exceeds the threshold value. (Abst.).

4. Specifically, Hausdorff discloses using a derivative of gait acceleration, or other parameters, such as angular velocity or tilt, to determine near fall and/or gait irregularity. (¶¶ 16, 153).

5. A Timed Up and Go (TUG) test assesses the tendency of a person to fall based on a time derivative of vertical acceleration. The tendency of falling is assessed when the rate of change of the acceleration is above a threshold. (¶¶ 18, 209, 154, 155).

6. When gait irregularity is detected the subject person is prompted, i.e., by audio message or tactile incitement, to adjust and/or stabilize the gait. (¶¶ 17, 205, 222).

ANALYSIS

Although Appellants concede that Smith discloses a pedometer, Appellants contend there is no reason to modify the pedometer of Smith to have included the near fall detection algorithms of Hausdorff, "because the prior art does not teach that there is any problem with the pedometer of Smith." App. Br. 6. According to Appellants, "there are no facts in the record that indicate Smith was defective in some way, nor do the facts provide a reason to modify Smith independent of appellants' disclosure," and thus, "the Examiner appears to have engaged in impermissible hindsight based on the applicant's disclosure." App. Br. 7.

Appellants also contend "[t]he combination of references does not teach or suggest 'calculating at least one step variable from the information

from a counted step.'" App. Br. 7. Further, according to Appellants, "[t]he combination of references does not teach or suggest 'an assessment of the risk of the patient to fall.'" wherein "the Examiner reads out the 'risk' limitation from the claims." App. Br. 8.

We consider all of Appellants' arguments and evidence presented, and disagree with Appellants' arguments regarding the Examiner's rejections of the claims. We adopt as our own: (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken, and (2) the reasons and rebuttals set forth in the Examiner's Answer in response to Appellants' arguments. However, we highlight and address specific findings and arguments below.

In particular, we find no error with the Examiner's conclusion that it would have been obvious to modify Smith's monitoring device to include the detection and alerting features of Hausdorff in order to decrease the safety concern by further allowing notification of near fall activity before the fall actually occurs. Ans. 11. We agree with the Examiner that one of ordinary skill in the art would readily recognize there is a need for a system to detect a near fall in people vulnerable to falls. *Id.* That is, we find the Examiner has provided sufficient articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.

As to Appellants' hindsight contentions (App. Br. 7), we are mindful the Supreme Court has clearly stated the "combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 416 (2007). "In determining whether the subject matter of a patent claim is

obvious, neither the particular motivation nor the avowed purpose of the patentee controls." *Id.* at 419.

We conclude that the skilled artisan, upon reading Smith's teaching of a monitoring device (FF 1, 2) would have found it obvious to also include Hausdorff's fall detecting and alerting features (FF 6). Thus, we find no error with the Examiner's ultimate legal conclusion that it would have been obvious to the skilled artisan at the time the invention was made to modify Smith's monitoring device to include an alarm notifying the user of near fall detection. (Ans. 12).

Appellants have provided no evidence that modifying Smith's monitoring device to include Hausdorff's gait irregularity detection and alerting the user of a near fall situation was "uniquely challenging or difficult for one of ordinary skill in the art," *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007). Nor have Appellants presented evidence that this incorporation of such a teaching in the same field of endeavor yielded more than expected results.

Rather, we find Appellants' invention is simply a modification of familiar prior art practices or acts (as taught or suggested by the cited combination of references) that would have realized a predictable result. The skilled artisan is "a person of ordinary creativity, not an automaton." *KSR* at 421.

Regarding Appellants' argument that the combination of references doesn't teach *calculating at least one step variable* (App. Br. 7), we find no error with the Examiner's reliance on Hausdorff for teaching and suggesting the contested limitation. In particular, we agree with the Examiner's finding (Ans. 12) that Hausdorff's movement parameter (FF 3), derivative of

acceleration parameter, angular velocity parameter or tilt parameter (FF 4) teach or at least suggest the disputed "*step variable*," as recited in claim 1.

We are also unpersuaded by Appellants' argument that the combination of references does not teach an assessment of the risk of the patient to fall. (App. Br. 8). In particular, we agree with the Examiner's finding (Ans. 12–13) that Hausdorff's TUG test assessment of the *tendency* of a person to fall based on a rate of change of acceleration above a threshold (FF 5) teaches or at least suggests the disputed limitation "*assessment of the risk of the patient to fall,*" as recited in claim 1.

Thus, we find the preponderance of evidence supports the Examiner's finding the combination of Smith and Hausdorff teaches or at least suggests the contested limitations of claim 1. (Ans. 12–13).

For these reasons, we agree with the Examiner's conclusion that the combination of Smith and Hausdorff would have taught or at least suggested the contested limitations of claim 1. Accordingly, on this record, we find no error in the Examiner's rejection of independent claim 1 and the not separately argued claims 2–5, 7–18, 20–25, 27 and 29–32, rejected on the same basis as claim 1.

As Appellants have not provided separate arguments with respect to claims 6, 19, and 28, rejected as being unpatentable over the combination of Smith, Hausdorff and Aminian, we similarly sustain the Examiner's rejection of these claims under 35 U.S.C. § 103(a). (App. Br. 9).

Appellants do not address the rejection of claim 26 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Smith, Hausdorff,

and Takenaka, in their Brief. Arguments not made are considered waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

V. CONCLUSION AND DECISION

We affirm the Examiner's decision rejecting claims 1–32 under 35 U.S.C. § 103(a).

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