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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JONATHAN MARK BUTZINE and
JEREMY PATRICK HANNON

Appeal 2015-005460
Application 13/449,080
Technology Center 2600

Before JOSEPH L. DIXON, JAMES R. HUGHES, and ERIC S. FRAHM, *Administrative Patent Judges*.

DIXON, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from a rejection of claims 1–3, 6–13, and 15–23. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

The invention relates to an X-ray imaging system that uses a handheld interface device and is configured to track the location of the handheld interface device (Spec. ¶ 5). Claim 1 reproduced below, is illustrative of the claimed subject matter:

> 1. An X-ray system comprising:
>
> an imaging system including a source of X-ray radiation, an X-ray image receptor, control circuitry for controlling the source of X-ray radiation, and a wireless interface; and
>
> a handheld interface device configured to communicate wirelessly with the imaging system, wherein the handheld interface device is configured to communicate wirelessly with the imaging system to communicate a signal to initiate an X-ray exposure, and wherein the handheld interface device comprises a tracking device located within the handheld interface device;
>
> wherein the imaging system is configured to track a location of the handheld interface device via the tracking device and to use the location as an input for at least one control function of the imaging system.

REFERENCES

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

Makrinos	US 5,206,894	Apr. 27, 1993
Uzuyama	US 5,416,819	May 16, 1995
Haumann	US 6,285,742 B1	Sept. 4, 2001

Kemink	US 6,563,430 B1	May 13, 2003
Hills	US 6,581,000 B2	June 17, 2003
Mazess	US 6,608,884 B1	Aug. 19, 2003
Butzine	US 8,174,358 B2	May 8, 2012

REJECTIONS

The Examiner made the following rejections:

Claims 1–3, 6–11, 13, 15, 16, and 18–21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Haumann, Makrinos, Hills, and Mazess.

Claims 12 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Haumann, Makrinos, Hills, Mazess, and Kemink.

Claim 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Haumann, Makrinos, Hills, Mazess, and Uzuyama.

Claims 1–3, 6–13, and 15–23 stand rejected under the non-statutory ground of obviousness-type double patenting over U.S. Patent 8,174,358 B2 to Butzine in view of Hills.

ANALYSIS

The Obviousness Rejections

The Examiner finds the combination of Haumann, Makrinos, Hills, and Mazess discloses all the limitations of independent claim 1, including that Hills teaches "the handheld interface device comprises a tracking device located within the handheld interface device," and that Mazess teaches "the imaging system is configured to track a location of the handheld interface device via the tracking device" (*see* Final Act. 3–6). In combining the Hills reference with Hamann and Makrinos, the Examiner concludes it would have been obvious to use Hills' position tracking module in Haumann's C-

arm X-ray device with remote control because it "would provide the exact position location of the medical device to control and trigger the functions of the medical device" (Final Act. 5).

Appellants contend "Hills is completely silent with regard to the tracking device being disposed within a handheld interface device that wirelessly interfaces with an imaging system" (App. Br. 9). Further, Appellants contend "the Examiner's reasoning for modifying the remote control with the tracking device in Haumann is flawed. Specifically, if the remote control of Haumann wirelessly communicated with the C-arm X-ray device . . . knowing the position of the user handling the remote control would not provide the exact position of the C-arm X-ray device." *Id.* We agree with Appellants.

Hills discloses a "position tracking device **14** may be configured to receive the indication that is transmitted by the distance sensor **12** and, based thereon, determine the real-time position of the user **18**" (Hills col. 3, ll. 50–53). Further, Hills discloses the position tracking device "may be embodied as, for example, a mobile computing device such as a laptop computer or a personal digital assistant" (Hill col. 3, ll. 53–55). Even if we agree with the Examiner that Hills teaches a "handheld interface device comprises a tracking device located within the handheld interface device," as recited in claim 1, Hill does not relate to tracking a handheld interface device that "is configured to communicate wirelessly with the imaging system to communicate a signal to initiate an X-ray exposure," as also recited in claim 1. Although Mazess teaches tracking the location of a physician's head-mounted display for use with a fluoroscopic X-ray machine (Mazess col. 4, ll. 36–39), this is performed in order to "present an orientationally accurate image corresponding to the head mount wearer's field of view" (Mazess

Abstract). Accordingly, Mazess suggests a tracking feature for a head-mounted display in the context of an imaging system, but does not suggest a tracking feature in a handheld interface device that communicates with an imaging system to initiate an X-ray exposure, as claimed.

While we find the Examiner has not shown there to be a suggestion in the cited prior art for implementing Hills' tracking device in a handheld device for initiating an X-ray exposure, we note that "the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for [the Board] can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). In this case, however, the Examiner's conclusion of obvious fails to provide a satisfactory rationale for implementing Hills' tracking device in a handheld device configured "to communicate a signal to initiate an X-ray exposure," as recited in claim 1. The Examiner's statement that combining Hills with Haumann "would provide the exact position location of the medical device to control and trigger the functions of the medical device" (Final Act. 5) does not reflect the inferences or creativity of a person of ordinary skill in the art. To the contrary, it is not clear how a tracking device in a handheld interface device would aid in locating the position of a medical device that the handheld interface device was intended to control. Rather, a tracking device on the handheld interface device would only aid in locating the position of the handheld interface device. Therefore, one of ordinary skill in the art would not have been motivated to combine Hills with Haumann for the reason provided by the Examiner.

We are, therefore, constrained by the record to find the Examiner erred in rejecting independent claim 1, independent claims 11 and 18 which

recite commensurate limitations, and dependent claims 2, 3, 6–10, 12, 13, 15–17, and 19–23 for similar reasons.

The Double Patenting Rejection

For the double patenting rejection, Appellants rely on the same arguments regarding Hills discussed above with respect to the obviousness rejection of claim 1 (*see* App. Br. 13). However, the arguments directed to Hills presented for the obviousness rejection do not carry the same persuasive weight when considering U.S. Patent 8,174,358 B2 to Butzine, which forms the basis of the double patenting rejection (*see* Final Act. 10–11). Butzine's claim 1 recites "the imaging system is configured to track a location of the handheld interface device," which is the feature we find missing from the prior art combination of the obviousness rejection discussed above. In the double patenting rejection, the Examiner finds Butzine's only shortcoming is not explicitly reciting a tracking device in the handheld interface device, and relies on Hills for disclosing a tracking device (Final Act. 11). The Examiner does not need to show that it would have been obvious to track a handheld interface device configured for use with an imaging system, as is the case with the obviousness rejection. Rather, the Examiner only need show it would have been obvious to use a tracking device to perform location tracking. Appellants' arguments (*see* App. Br. 7–9) do not show the Examiner failed in this respect.

We are, therefore, not persuaded the Examiner erred in rejecting claim 1, and claims 2, 3, 6–13, and 15–23 not specifically argued separately.

CONCLUSIONS

Under 35 U.S.C. § 103(a), the Examiner erred in rejecting claims 1–3, 6–13, and 15–23.

Under the doctrine of non-statutory obviousness-type double patenting, the Examiner did not err in rejecting claims 1–3, 6–13, and 15–23.

DECISION

For the above reasons, the Examiner's decision rejecting claims 1–3, 6–13, and 15–23 is affirmed.

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