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EXAMINER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ERWIN MORATH

Appeal 2011-002886
Application 11/490,718
Technology Center 3600

Before: MICHAEL C. ASTORINO, REMY J. VANOPHEM, and
NEIL T. POWELL, *Administrative Patent Judges*.

VANOPHEM, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellant appeals under 35 U.S.C. § 134 from a rejection of claims 1-11, 19, 20 and 23-28. We have jurisdiction under 35 U.S.C. § 6(b). A hearing was held on February 12, 2013.

The claims are directed to an operations system for a crane, preferably crawler or truck crane. Claims 1 and 19, reproduced below, are illustrative of the claimed subject matter.

1. A system comprising:

a crane;

a sensor coupled in the crane and configured to detect an operating condition of the crane;

a crane monitoring means incorporated in the crane, operatively coupled to the sensor, and configured for monitoring the operating condition of the crane, the crane monitoring means including a calculation unit and a first display unit; and

an operations planner incorporated in the crane, operatively coupled to the sensor, configured for planning an operation of the crane and for redundantly monitoring the operating condition of the crane in dependence on the sensor, the operations planner including a computer and a second display unit.

19. A method for planning and monitoring operations of a crane, the method comprising:

planning an operation of the crane via an operations planner comprising a computer and a first display unit disposed in the crane;

monitoring an operating condition of the crane via a crane monitoring means comprising a calculation unit and a second display unit, also disposed in the crane; and

redundantly monitoring the operating condition of the crane via the operations planner, wherein the first display unit

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can be switched from displaying crane planning operations to displaying the operating condition.

REFERENCES

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

Pietzsch	US 5,731,974	Mar. 24, 1998
Ishimoto	US 2004/0133327 A1	Jul. 8, 2004
Frankenberger	US 2005/0098520 A1	May 12, 2005
Rudnik	DE 196 12 423 A1	Oct. 2, 1997

REJECTIONS

Appellant seeks our review of the following rejections:

1. Claims 1-5, 7, 9-11, 19, 20, 23, 24, 27 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Rudnik, in view of the teachings of Frankenberger and the teachings of Ishimoto.

2. Claims 6, 8, 25 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rudnik in view of Ishimoto, Frankenberger, and further in view of the teachings of Pietzsch.

ANALYSIS

Rejection of claims 1-5, 7, 9-11, 19, 20, 23, 24, 27 and 28 as unpatentable over Rudnik, Frankenberger, and Ishimoto

The Examiner finds that Rudnik teaches a crane mechanism having two programmable controllers, each coupled to its own set of sensors. The Examiner finds that Rudnik varies from claim 1, among other things,

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because its crane mechanism does not teach that an operations planner for redundantly monitoring the operating condition of the crane, as specified in claim 1. Ans. 3.

The Examiner further finds that Frankenberger teaches a similar control system which can be switched between a controlling mode and a planning mode. Ans. 3 (citing Frankenberger, para. [0012]). Therefore, the Examiner concludes it would have been obvious to one of ordinary skill in the art at the time the invention was made by Appellant to modify one of the programmed controllers of Rudnik to have it include a planning mode, and to have it switch between a controlling mode and a planning mode, so that the operator can use the best parameter combination for each lift, as taught by Frankenberger. Ans. 3.

Appellant contends neither Rudnik nor Frankenberger shows the multi-functionality of redundant crane monitoring and operations planning, nor does Rudnik recognize the benefits of such an approach in that the same programs used for redundant crane monitoring can be re-used for operations planning. Reply Br. 3-4. Appellant's contention is persuasive.

From the full translation of Rudnik, at page 7, the Appellant contends that Rudnik teaches that each controller interrogates its own sensor data to determine whether the sensors surpass certain limit values, and from this each controller determines its own interlocking result. It is only this interlocking result information that is then communicated between controllers for comparison of one controller's interlocking result with the other controller's interlocking result. *See* Rudnick translation, page 7. Reply Br. 3. If one of the programmed controllers is switched to be a planner, as proposed by combining the teachings, Appellant contends, Rudnick's monitoring is rendered inoperable as the output of the two

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controllers can no longer be compared to see if they agree because programmed controller 1 is performing planning. App. Br. 13.

Further, the Appellant contends the Examiner's reliance on the theory of inherency at page 7 of the Answer is not well placed in that the Examiner's own statement leads to the opposite conclusion—that this feature cannot be inherent. In relying on the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the alleged inherent characteristic necessarily flows from the teachings of the applied prior art. *See In re King*, 801 F.2d 1324, 1327 (Fed. Cir. 1986). Appellant further contends that inherency requires the missing feature necessarily be present in the cited reference. However, the Appellant points out that the Examiner relies merely on “similarity” in stating that “a program used to plan a given crane operation would be similar to a program used when operating that crane environment.” Reply Br. 5-6.

Appellant agrees with the Examiner's finding that Frankenberger teaches a controller that is switched back and forth between crane control mode and planning mode. Therefore, Appellant contends combining Frankenberger's approach with Rudnik, as the Examiner has stated, results in a controller that switches back and forth between monitoring and planning. Thus, Appellant points out, when one switches the controller to a planning mode, the result is that Rudnik's monitoring is necessarily lost, because one of the controllers is no longer monitoring its sensor, but rather performing planning. Reply Br. 6-7. This modification, according to Appellant, destroys the monitoring functionality of the primary reference. This reasoning by the Appellant is persuasive.

Ishimoto is used by the Examiner to show that at the time of the invention, it would have been obvious to one of ordinary skill in the art to use a separate monitor for each of the controllers. The shortcomings of Frankenger are not cured by the teachings of Ishimoto. Accordingly, the Examiner's proposed combination of the references lacks articulated reasoning with rational underpinning to support the legal conclusion of obviousness. Therefore, the rejection of independent claim 1 and claims 2-5, 7, 9, 10, 23 and 24 depending therefrom under 35 U.S.C. § 103(a) is not sustained.

Since the rejection of independent claims 11 and 19 relies on the same rationale as used against claim 1, we will not sustain the rejection of independent claims 11 and 19 as well as claims 20, 27 and 28 that directly or indirectly depend thereon.

Rejection of dependent claims 6, 8, 25 and 26 over Rudnik, Ishimoto, Frankenger and Pietzsch

The Examiner rejected dependent claims 6, 8, 25 and 26 under 35 U.S.C. § 103(a) as unpatentable over the teachings of Rudnik, Ishimoto and Frankenger and further in view of the teachings of Pietzsch. The Examiner finds that Pietzsch shows a similar crane control with most of the crane programs recited in claims 6 and 25 and with graphic representations of the crane set-up variants. Ans. 4. The shortcomings of the combinations of Rudnik, Ishimoto and Frankenger with respect to the rejections of independent claims 1 and 11, from which claims 6, 8, 25 and 26 depend either directly or indirectly from, are not cured by the teachings of Pietzsch. Therefore, the rejection of dependent claims 6, 8, 25 and 26 is not sustained.

CONCLUSIONS

1. The rejection of claims 1-5, 7, 9-11, 19, 20, 23, 24, 27 and 28 under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Rudnik, in view of the teachings of Frankenberger and the teachings of Ishimoto is reversed.

2. The rejection of claims 6, 8, 25 and 26 under 35 U.S.C. § 103(a) as being unpatentable over Rudnik in view of Ishimoto, Frankenberger, and further in view of the teachings of Pietzsch is reversed.

DECISION

REVERSED

MP