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STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
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EXAMINER

GAGLIARDI, ALBERT J

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOODMAN GLOBAL HOLDINGS, INC.
Requester

v.

CARRIER CORPORATION
Patent Owner

Appeal 2016-006650
Reexamination Control 95/002,304
Patent US 7,243,004 B2¹
Technology Center 3900

Before STEVEN D.A. McCARTHY, DANIEL S. SONG, and
BRETT C. MARTIN, *Administrative Patent Judges*.

MARTIN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

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

We affirm-in-part.

¹ Issued to Shah et al. on July 10, 2007 (hereinafter the '004 patent).

CLAIMED SUBJECT MATTER

The claims are directed to “a heating, ventilation and air conditioning system wherein the various units report to a central control about characteristics of the units.” Spec. col. 1, ll. 7-9. Claim 6, reproduced below, is illustrative of the claimed subject matter:

6. An HVAC system comprising:
 - an indoor unit having a control operable to communicate characteristic information of said indoor unit to a central control,
 - an outdoor unit having a control operable to communicate characteristic information of said outdoor unit to said central control; and
 - said central control communicating with said indoor unit and said outdoor unit, and said central control receiving said characteristic information from said indoor unit and said outdoor unit, and determining an optimal control strategy for said indoor unit and said outdoor unit based upon said reported characteristic information, said central control storing a plurality of optimal control strategies, and selecting a particular one of said optimal control strategies to utilize based upon the particular characteristic information reported from said indoor unit and said outdoor unit; and
 - wherein said indoor unit is one of a furnace and a heater/fan combination, and said outdoor unit is one of an air conditioner and a heat pump.

REFERENCES

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

Heckenbach	US 4,616,325	Oct. 7, 1986
Rein	US 5,390,206	Feb. 14, 1995
Bahel	US 5,475,986	Dec. 19, 1995
Baldwin	US 5,971,597	Oct. 26, 1999
Wada	US 6,126,080	Oct. 3, 2000

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Hoog	US 6,385,510	May 7, 2002
Lentz	US 6,438,971	Aug. 27, 2002
Wada	US 6,453,689	Sept. 24, 2002
Dolan	US 6,535,138	Mar. 18, 2003
Amundson	US 7,225,054	May 29, 2007
Moroney	US 2002/0082884 A1	June 27, 2002
Yoon	US 2004/0204793 A1	Oct. 14, 2004

REJECTIONS

Claims 21,² 25–29, 31, 32, 34–39, 41–43, 46, 50–52, 54, 55, 60, 63–67, 69, 70, and 73–92 stand rejected under 35 U.S.C. § 112 first paragraph as failing to comply with the written description. RAN 14.

Claim 73–92 stands rejected under 35 U.S.C. § 314 as enlarging the scope of the claims of the patent under reexamination. RAN 17.³

Ground 1: Claims 1, 2, 4, 6, 13, and 16–18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Matsumoto. *Id.*⁴

Ground 2: Claims 1–4, 6–8, 13, and 16–18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsumoto and Bahel. RAN 24.

² The Examiner lists claim 22 as rejected, but provides no explanation as to why this claim was rejected. RAN 14.

³ The Patent Owner cancelled claims 73-92, which obviates this rejection as well as Rejections 1a and 7a, which pertain only to claim 73.

⁴ The Examiner also rejects claims 20–92 as anticipated or unpatentable over Matsumoto, either alone or in combination with a number of other references. RAN 5–8. The Patent Owner states that these grounds (1b–1p and 4) stand or fall with Ground 1. PO App. Br. 5.

Ground 3: Claims 1, 2, 6, 9, 15, and 17–19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsumoto and Ishizaki. RAN 29.⁵

Ground 7: Claims 1–4, 6–8, 13, and 16–18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bahel and HVAC Handbook. RAN 36.⁶

OPINION

Matsumoto

The Examiner relies on Matsumoto in whole or in part for each of Grounds 1–6. In that regard, the Requester and the Examiner assert, among other things, that Matsumoto teaches the claimed central control. RAN 18, Req. Resp. Br. 4. Dr. Auslander states that Matsumoto’s “central controller controls the entire system, and for each interior unit in that system, the central controller performs the operations in the flow chart of Figure 3.” Auslander Dec. ¶ 45. Based upon this statement, both the Examiner and the Requester assert that Matsumoto’s central control performs the operations in Figure 3, and thus “[f]or each interior unit (and corresponding exterior unit(s)), the central controller decides whether those units are capable of simultaneous and/or automatic heating and cooling.” Req. Resp. Br. 4.

⁵ The Examiner also rejects claims 10–12 as unpatentable over Matsumoto in combination with Ishizaki and either of Narishima and Rein. RAN 8. The Patent Owner states that these grounds (5 and 6) stand or fall with Ground 3. PO App. Br. 6.

⁶ The Examiner also rejects claims 20–92 as unpatentable over Bahel and HVAC Handbook as the primary references in combination with numerous other references. RAN 9–12. The Patent Owner states that these grounds (7b–7n and 8–11) stand or fall with Ground 7. PO App. Br. 6.

This, however, is a misreading of Matsumoto and a fatal defect of the rejection. Matsumoto explains the context for the operation of the system under the heading “Problems that the invention is to solve.” Matsumoto ¶ 5. Matsumoto explains that the problem is solved by “providing an air conditioner with a good installation process in which, upon a start-up of the air conditioner or a restart after a reset, information regarding the exterior unit is sent from the exterior unit to the connected interior units, *which switch their operational control automatically.*” Matsumoto ¶ 6 (emphasis added). This set up is in contrast to prior art systems where “the setting switch [DIP switch or the like] must be set to accord with the type of the configured system when installing the air-conditioning system.” Matsumoto ¶ 4. In other words, the purpose of Matsumoto is to eliminate physical setting of DIP switches at the interior unit and allows the interior and exterior units to communicate and set their operational controls accordingly without the use of physical switches.

As the Patent Owner points out in regard to selecting a control strategy, “[t]he rejections are premised on equating this limitation with a decision made in Matsumoto regarding whether ‘simultaneous heating and cooling operation can be selected,’ but that decision is made by Matsumoto’s *interior units*, not Matsumoto’s ‘central controller.’” PO App. Br. 8. Regarding Figure 3, the Patent Owner further points out:

Matsumoto’s “central controller” does not receive any information from the interior or exterior units until steps S7 and S8.⁷ (Matsumoto ¶24.) Matsumoto’s “central controller”

⁷ The Patent Owner’s description of Figure 3 is not entirely complete because Matsumoto actually states that “interior unit 3-I sends its equipment-identification information and operational control selection

therefore would not have any information about the units at the time of step S6, and therefore would not be able to make a selection as recited in the '004 patent.

PO Rebuttal Br. 2. Matsumoto makes clear that the purpose of the information exchange either at start up or on a reset is that “the exterior unit sends to the connected interior units equipment-type information regarding the exterior unit, and each interior unit automatically switches its operational control, obviating the need for setting a switch during installation.”

Matsumoto ¶ 28. Accordingly, while similar in nature, the setting of operational parameters based on communicated information takes place in Matsumoto at the units themselves and not at the central control as required. Once the interior and exterior units communicate and set their operational parameters, then these possible operational parameters are sent for selection by a user at either the remote or central control.

Furthermore, as the Patent Owner points out, the Requester and the Examiner rely upon an inherency argument for the fact that the central control of Matsumoto picks from a set of algorithms once it receives the characteristic information from the interior and exterior units. *See* Resp. Br. 4, Auslander Dec. ¶ 44–46. As the Patent Owner asserts, inherency requires “that Matsumoto’s ‘central controller’ *necessarily* stores and selects control strategies” (PO Rebuttal Br. 3), but given that Matsumoto teaches that

information to remote control 5-I or central controller 7 in step 5.”
Matsumoto ¶ 23. This, however, does not affect the analysis of Matsumoto as a whole, because as the Patent Owner correctly points out, the sent information is not received until S7 and S8, and by that time, the control decision of step 6 has already been performed, not at the controller, but at the interior/exterior units.

operational control is automatically done at the units themselves, we see no basis to conclude that such selection occurs at the central control, necessarily or otherwise.

Bahel

Although each of Grounds 1–6 relies upon Matsumoto for this teaching, the Examiner and Requester also assert an alternative basis in Ground 2 that Bahel also teaches the central control receiving the necessary characteristic information and also performing the selection of control algorithms as claimed. Resp. Br. 7–9. In asserting this, the Requester relies on the teaching in Bahel relating to “self-test/configuration,” which is labeled as element 224. Resp. Br. 7. We do not deny that Bahel includes a box 224 in a schematic that is labeled “self-test/configuration,” but we cannot ascribe the same function to this scant disclosure as does the Requester. Bahel Fig. 6. The only description in Bahel for this states: “If desired, the system may be programmed to perform self-tests and self-configuration. This is performed by block 224.” Bahel col. 10, ll. 54–56. The Patent Owner’s expert has stated that this self-test disclosure relates only to tuning the vapor compression cycle. Henze Supp. Dec. ¶ 20. As the Patent Owner also states, Dr. Auslander “admitted that nothing in Bahel, including this specific passage, discloses auto-configuration.” App. Br. 39.

We further agree with the Patent Owner that “[e]ven if the lone phrase ‘self-configuration and self-tests’ envisioned the self-configuration concept embodied in the ’004 patent, Bahel still does not teach the claimed invention” because “[i]nventions are not rendered obvious by vague and general guidance to possibly explore an entire arena or new technology.” *Id.*

Simply put, we have insufficient information in Bahel to determine what is meant by self-test and self-configuration to adequately assess whether it teaches the claimed invention.

We also agree with the Patent Owner that the Requester mischaracterizes the teaching in Bahel by asserting that “Bahel discloses multiple control algorithms, but does not use all of them at once. Thus an algorithm must be selected in Bahel.” App. Br. 41 citing Ex. 11, 12. As the Patent Owner correctly points out, “the ‘strategies’ and ‘algorithms’ recited in the ’004 patent refer to system-level strategies and are associated with a certain combination of equipment,” but “are not to be confused with the many functions of HVAC systems that Bahel loosely refers to as ‘algorithms’ or ‘routines.’” App. Br. 41. We agree with the Patent Owner that there is “no basis for concluding that the ‘non-use’ of an algorithm would *necessarily* be based on characteristic information received rather than such things as temperature observed or a user preference.” *Id.*

Accordingly, we are persuaded that Matsumoto is deficient as noted above and Bahel does not cure this deficiency. Because each of Grounds 1, 2, and 4 erroneously relies upon either Matsumoto or Bahel for these teachings, we do not sustain these rejections. Furthermore, Ground 7 relies on Bahel for the aspects relating to the central control and self-configuration and the HVAC Handbook does not cure these deficiencies. Accordingly, we also do not sustain Ground 7.

Ishizaki

Regarding Ground 3, we agree with the Patent Owner that this ground “relies on the Examiner’s same erroneous interpretation of Matsumoto

described above, and for that reason alone cannot stand.” PO Rebuttal Br. 16. Furthermore, as stated by the Patent Owner, “Ishizaki does not teach or suggest a ‘central control’ that uses any information collected from the attached units to ‘select’ a ‘control strategy.’” PO Rebuttal Br. 17. Accordingly, Ishizaki does not make up for the deficiencies stated above with regard to Matsumoto and therefore Grounds 3, 5, and 6 are also not sustained.

Written Description

In general, we note that the detailed description of the ’004 patent includes only approximately two columns of disclosure. During the Reexamination, the Patent Owner attempted to add an additional 72 claims. Many of these claims include details about specific elements that perform the general capabilities outlined in the patent. The Examiner and the Requester assert that while the general nature of the functionality is described in the ’004 patent, many of these specific details are not sufficiently described in the Specification so as to provide adequate written description to support the claims.

Claims 25, 34, 35, 50, 80, and 92

The Examiner asserts that each of these claims contain limitations describing a specific auxiliary element of the system configured to send the claimed “one or more characteristics” to the central control. RAN 14–15. The Examiner accepts that these various devices may be part of the system, but asserts that there is no disclosure that they perform the action of sending information to the central control. *Id.*; see also Req. Comments dated April 10, 2013, 42–43. As noted above, while the ’004 patent generally discloses

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that characteristics of the indoor and outdoor units are sent to the central control, we see nothing to support that the individual elements of these claims may also be said to send such information. Accordingly, we sustain the rejection of claims 25, 34, 35, 50, 80, and 92.

Claims 21, 43, and 75

The Examiner asserts that there “is no support for an outdoor unit [that] communicates with auxiliary equipment.” RAN 15. As with the above, we do not agree that the Specification supports the outdoor unit communicating as claimed. We do not agree that the disclosure that a reporting unit “may carry information from various accessing units to report to microprocessor 23” necessarily means that the specifics of the claimed “characteristics” is what is communicated as claimed. PO Comments to ACP dated June 16, 2014, p. 23. Accordingly, we sustain this rejection.

Claims 26, 36, 51, 63, and 82

The Examiner asserts that the Specification’s disclosure of information being programmed “into each unit’s microprocessor” is insufficient to support the claimed programming of information “onto the indoor and outdoor units at [the] time of manufacture.” RAN 15. While the Patent Owner may have chosen language that is not identical to the Specification, we do not agree that this arises to the level of lack of written description. Whether it is programmed “into each unit’s microprocessor” or “onto the unit” is not significantly different so as to warrant rejection. Accordingly, we do not sustain this rejection.

Claims 27, 28, 37, 38, 64, 65, 66, 83, and 84

The Examiner asserts that there is a difference between “programming” and “setting” and so the Specification does not teach the claimed “programming” by way of disclosing “setting” the devices by means of switches, jumpers, or model plugs. RAN 15–16. Again, whether setting or programming, the Specification make clear that these devices receive information by way of switches, jumpers, or model plugs. We see no basis to reject the claims for merely using the word “programming” over the disclosed “setting” and agree with the Patent Owner that one of ordinary skill in the art would appreciate that the Patent Owner was in possession of the claimed invention. As such we do not sustain this rejection.

Claims 29, 39, 52, 67, and 85

The Examiner again makes a distinction between “microprocessors, and electronic control” as not supporting “‘programming information onto’ the unit.” RAN 16. Again, we do not see that the mere use of different terms and stating that information is programmed onto the unit rather than the microprocessor supports a rejection for lack of written description. We do not sustain this rejection.

Claims 31, 41, 54, 69, and 87

The Examiner asserts that the claimed “configured to display an indication that said characteristics of the plurality of HVAC units were received properly” is not supported by the disclosure that the “display would merely indicate that the information has be[en] received from the reporting units.” RAN 16. The Examiner asserts that it is up to the installer to ensure proper installation. *Id.* We do not read the claim limitation as referring to

the accuracy of the installation, but merely that whatever information is received has been properly received. The Specification adequately supports that the information regarding the reporting units is displayed, which means the information was “received properly” as claimed. We do not sustain this rejection.

Claims 32, 42, 55, 70, and 88

Similar to the rejection of claim 31 above, the Examiner asserts that this claim group is improper because “it is up to the installer to ensure proper installation and that the information has been properly reported.” RAN 16. We agree with the Patent Owner, however, “[i]f the installer can use this displayed information to determine proper receipt and installation, then the information displayed is ‘an indication’ of such.” PO Comments to ACP dated June 16, 2014, p. 21. Accordingly, we do not sustain this rejection.

Claims 73–92

Having already summarily sustained the broadening rejection of these claims, we need not reach the written description rejection as to these claims.

DECISION

The Examiner’s art-based rejections of claims 1–72 are REVERSED. The Examiner’s written description rejection of claims 26–29, 31, 32, 36–39, 41–43, 46, 51, 52, 54, 55, 60, 65–67, 69, 70, 82–85, 87, and 88 is REVERSED. The Examiner’s written description rejection of claims 21, 25,

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34, 35, 43, 50, 75, 80, and 92 is AFFIRMED. The Examiner's broadening rejection of claims 73–92 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). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

PATENT OWNER:

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

THIRD PARTY REQUESTER:

BAKER BOTTS L.L.P.
910 LOUISIANA STREET
HOUSTON, TX 77002