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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DAVID W. BAARMAN, SCOTT A. MOLLEMA, and JOSHUA K. SCHWANNECKE

Appeal 2018-005724
Application 14/146,969
Technology Center 2800

Before ADRIENE LEPIANE HANLON, N. WHITNEY WILSON, and BRIAN D. RANGE, *Administrative Patent Judges*.

HANLON, *Administrative Patent Judge*.

DECISION ON APPEAL

A. STATEMENT OF THE CASE

The Appellant[1] filed an appeal under 35 U.S.C. § 134(a) from an Examiner's decision rejecting claims 19–36. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[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 Philips IP Ventures B.V. Appeal Brief dated February 21, 2018 ("App. Br."), at 2.

The claims on appeal are directed to an inductive power supply for transferring power to a remote device, such as a cell phone, and a method of inductively transferring power to a remote device.

Representative claim 27 is reproduced below from the Claims Appendix to the Appeal Brief.

> 27. An inductive power supply for transferring power to a remote device, said inductive power supply comprising:
>
> a primary coil assembly having a plurality of primary coils;
>
> memory storing a plurality of inductive power supply control methods, wherein each of said plurality of inductive power supply control methods is different, and wherein operation according to each of said plurality of inductive power supply control methods enables supply of power inductively;
>
> a communication system for receiving information regarding a first remote device control identification class, a second remote device control identification class, and a remote device power class;
>
> a controller configured to select in response to said first control identification class, one of said plurality of inductive power supply control methods from among said plurality of inductive power supply control methods stored in memory to supply power inductively to the remote device, and wherein said controller is configured to select in response to said second, different, control identification class, a different one of said plurality of inductive power supply control methods from among said plurality of inductive power supply control methods stored in memory to supply power inductively to the remote device;
>
> wherein said controller is configured to select one or more of said plurality of primary coils of said primary coil assembly for transferring power to said remote device based on at least one of said remote device power class, said first remote device control identification class, and said second remote device control identification class and initiate power transfer to the remote device with said selected inductive power supply control method over said one or more selected primary coils.

App. Br. 25–26.

The Examiner maintains the following grounds of rejection on appeal:

(1) claims 33 and 34 under 35 U.S.C. § 112, first paragraph, based on the written description requirement; and

(2) claims 19–36 under 35 U.S.C. § 103(a) as unpatentable over Nakamura et al.[2] in view of Partovi et al.[3]

B. DISCUSSION

1. Rejection (2)

The Appellant states that "[t]he obviousness rejection of claims 19–36 is being argued as a group such that all claims stand or fall together." App. Br. 7. Therefore, for purposes of this appeal, we focus our attention on claim 27.

Claim 27 is directed to an inductive power supply for transferring power to a remote device comprising, *inter alia*,

> a communication system for receiving information regarding a first *remote device control identification class*, a second *remote device control identification class*, and a *remote device power class* [and]
>
> a controller configured to select *in response to said first control identification class, one of said plurality of inductive power supply control methods* from among said plurality of inductive power supply control methods stored in memory to supply power inductively to the remote device, and wherein said controller is configured to select *in response to said second, different, control identification class, a different one of said plurality of inductive power supply control methods* from among said plurality of inductive power supply control methods stored in memory to supply power inductively to the remote device . . . .

App. Br. 25–26 (emphases added).

The Appellant discloses:

[2] US 2005/0068019 A1, published March 31, 2005 ("Nakamura").
[3] US 7,952,322 B2, issued May 31, 2011 ("Partovi").

> The *control identification classes* may identify *different control methods* for the inductive power supply to use to charge or power the remote device. Examples of control identification classes include charging set point control, charging error control, power supply set point control, power supply error control and power supply direct control.

Spec. ¶ 68 (emphasis added).

The Appellant discloses that a remote device *power class* "categorizes how much power the remote device desires." Spec. ¶ 58. In one embodiment, the Appellant discloses that a low power class is defined as devices that desire between 0 and 5 watts of power (e.g., a cell phone), a medium power class is defined as devices that desire between 5 and 110 watts of power (e.g., a laptop computer), and a high power class is defined as devices that desire more than 110 watts of power (e.g., a kitchen appliance). Spec. ¶ 59.

Thus, "a power class identifies the *amount* of power that a device will receive [and] a control identification class identifies the *method* that the system will use to *deliver that power*." App. Br. 12 (emphasis added).

First, we address the method that the claimed invention uses to deliver power, i.e., the plurality of inductive power supply control methods. The Examiner finds Nakamura discloses an inductive power supply for transferring power to a remote device (e.g., a portable telephone) according to an "inductive power supply control method." Non-Final Act. 9.[4] The Examiner finds Nakamura does not expressly disclose that different control identification classes[5] result in the

[4] Non-Final Office Action dated September 25, 2017.
[5] The Appellant does not provide a definition of "control identification class" in the Specification. The Examiner, however, finds that a remote device control identification class is code identifying power reception equipment. Non-Final Act. 8.

selection of different power supply control methods as recited in claim 27. Non-Final Act. 9. Likewise, the Examiner finds "Nakamura does not expressly disclose storing these control methods in memory or selecting more than one of the methods." Non-Final Act. 9. The Examiner, however, finds Partovi discloses an inductive power supply comprising a memory for storing a plurality of different inductive power supply control methods and a controller configured to select a control method in response to a particular remote device control identification class. Non-Final Act. 9–10.

More specifically, the Examiner finds Partovi discloses two different power supply control methods. Non-Final Act. 11. The first and second power supply control methods are said to be "'power supply error control', where feedback is used to correct error (deviation) in the amount of power supplied to the load," and a third power supply control method is said to be "'power supply direct control', where the receiver does not include a battery and the transmitter powers the load directly." Non-Final Act. 11; *see also* App. Br. 26 (reciting, in claim 29, that inductive power supply control methods include "power supply error control" and "power supply direct control"); Non-Final Act. 12 (finding that Partovi discloses at least two power supply control methods from the list recited in claim 29). The Examiner finds that "[s]ince the Partovi information results in the selection of a power supply control method, it is proper to interpret that information as regarding a remote device control identification class." Non-Final Act. 11. In other words, the Examiner finds Partovi teaches that each power supply control method is selected in response to a corresponding control identification class. *See* Ans. 5[6]

[6] Examiner's Answer dated March 22, 2018.

(finding that the selection between control methods is based on information from a receiver or mobile device).

The Examiner relies on column 10 of Partovi to teach that "information received from the receiver [or mobile device] results in the *selection* of one of two power supply control methods (that are stored in memory)." Non-Final Act. 10 (emphasis added). The Appellant argues that that portion of Partovi "does not teach or suggest using information received from a receiver to select one of multiple power supply control methods stored in memory." App. Br. 16.

The Appellant's argument is not persuasive of reversible error. Partovi discloses that the *duty cycle* of the switch in a charger circuit can be changed to provide the appropriate voltage/current in the receiver after being informed "about the voltage/current characteristics of the [receiver or the mobile] device." Partovi, col. 10, ll. 13–21. Alternatively, Partovi discloses that the *frequency* of the switch can be changed to create the appropriate voltage in the receiver. Partovi, col. 10, ll. 25–27. Finally, Partovi discloses that the duty cycle, frequency, *and/or* voltage of the switch can be adjusted to achieve the desired voltage/current in the mobile device. Partovi, col. 10, ll. 29–34.

There appears to be no dispute on this record that at least duty cycle and frequency are control points of respective different control methods. *See* Reply Br. 7[7] (arguing that "different control points" include frequency and duty cycle); App. Br. 20 (arguing that one of ordinary skill in the art would have appreciated that "inherently included within different control methods are control methods that are different because they have different control points"); Ans. 9 (finding that "[s]ince Partovi discloses different frequency and duty cycle values, it follows that

[7] Reply Brief dated May 14, 2018.

Partovi[] discloses different control points and different control methods"). Thus, we find that Partovi suggests that at least two control points (i.e., duty cycle and frequency) of at least two respective control methods may be changed in response to characteristics or a control identification class of the receiver or mobile device.[8]

Second, turning to the claimed remote device power class (i.e., the *amount* of power that a device will receive), the Examiner finds Nakamura's communication system receives information regarding "information on consumed power," which corresponds to the claimed remote device power class. Non-Final Act. 8; Ans. 8. The Appellant argues that "information on consumed power" is not indicative of the amount of power the remote device "desires," in contrast to the claimed remote device power class, and thus is not a remote device power class as claimed. App. Br. 12; *see also* Spec. ¶ 58 (disclosing that a power class "categorizes how much power the remote device desires").

The Appellant's argument is not persuasive of reversible error. Nakamura discloses that the level of power to be transmitted is determined from a signal containing "information on consumed power" received from a device (e.g., a portable telephone). Nakamura ¶ 91. Based on that information, a coil for transmitting power is said to be selected and the required power is transmitted to the power reception equipment. Nakamura ¶ 91. To illustrate, Nakamura discloses that "in a case where the power of the power reception equipment is small, a coil with a large number of turns is used" and "[i]n a case where the power of the

[8] Notably, the Appellant does not direct us to any evidence establishing reversible error in the Examiner's finding that the information received from the receiver or mobile device in Partovi, which results in the selection of a power supply control method, corresponds to the claimed remote device control identification class. *See* Non-Final Act. 10, 11.

power reception equipment is large, a coil with a small number of turns is used." Nakamura ¶ 91. Thus, we find that Nakamura discloses a remote device power class as claimed. *See* Ans. 7 (finding that "[t]he Nakamura 'information on consumed power' is a communicated signal that commands the transmitter to select one of three power levels, in the same manner as explained by the [Appellant's] (specification, par 69)"].

In sum, the Appellant has not shown reversible error in the Examiner's conclusion of obviousness. Therefore, the obviousness rejection of claims 19–36 is sustained.

2. Rejection (1)

Claims 33 and 34 recite that "each of the plurality of inductive power supply control methods enables supply of power inductively based on *a different control point*." App. Br. 27 (emphasis added).

The Examiner finds the term "control point" appears once in the Specification at paragraph 64, which states that "[d]uring active power transfer mode 908, the presence of the device and the status of the *control point* is continually checked 910 in a feedback loop with control feedback packets from the remote device 912." Non-Final Act. 7. The Examiner finds there is no written description support for "different" control points as claimed. Non-Final Act. 7.

The Appellant argues "that a person of ordinary skill in the art at the time of the invention would have understood that different inductive power supply control methods include inductive power supply control methods that enable supply of power inductively based on different control points." App. Br. 19. The Appellant, however, does not direct us to any portion of the original disclosure defining the term "control point" or describing the relationship between a control point and a control method, whereby one of ordinary skill in the art would have understood

that, at the time the instant Application was filed, the Appellant has possession of "different" control points. *See* Ans. 15 (finding that the Appellant has not defined "control point").

The Appellant argues that "[a] person of ordinary skill in the art at the time of the invention would have appreciated and understood that control identification classes may identify different control methods and that *inherently included within different control methods are control methods that are different because they have different control points.*" App. Br. 20 (emphasis added). The Appellant, however, does not direct us to any evidence that supports a finding of inherency. *See* Ans. 15 (finding that the Appellant provides no support for the inherency statement).

Based on the foregoing, a preponderance of the evidence of record supports the Examiner's finding that the Appellant's original disclosure does not provide written description support for "a different control point" recited in claims 33 and 34. Therefore, the rejection of claims 33 and 34 under 35 U.S.C. § 112, first paragraph, based on the written description requirement, is sustained.

C. CONCLUSION

The Examiner's decision is affirmed.

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
19–36	103(a)	Nakamura, Partovi	19–36	
33, 34	112, first paragraph	Written Description	33, 34	
Overall Outcome			19–36	

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