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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/263,243	10/06/2011	Vijaya R. Lakamraju	PA0009646U-U71.12-41KL	6700
87059	7590	12/01/2016	EXAMINER	
Cantor Colburn LLP - Carrier 20 Church Street, 22nd Floor Hartford, CT 06103			SYED, NABIL H	
			ART UNIT	PAPER NUMBER
			2683	
			NOTIFICATION DATE	DELIVERY MODE
			12/01/2016	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* VIJAYA R. LAKAMRAJU, JOHN M. MILTON-BENOIT,  
ULF J. JONSSON, and JOSEPH ZACCHIO

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Appeal 2015-007737  
Application 13/263,243  
Technology Center 2600

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Before MARC S. HOFF, JOHN P. PINKERTON, and  
ALEX S. YAP, *Administrative Patent Judges*.

PINKERTON, *Administrative Patent Judge*

DECISION ON APPEAL

Appellants<sup>1</sup> appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1, 3–10, and 12–23, which constitute all of the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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<sup>1</sup> Appellants identify UTC Fire and Security Corp. as the real party in interest. Br. 1.

## STATEMENT OF THE CASE

### *Introduction*

Appellants' disclosed and claimed invention generally relates to power management circuitry to minimize power consumption by an electronic door lock circuit. Spec. 1.<sup>2</sup>

Claim 1 is representative and reproduced below (with the disputed limitations *emphasized*):

1. A power management circuit for an electronic door lock, the circuit comprising:

ON/OFF circuit operably connected to generate an initial enable signal in response to a detected keycard;

a load switch circuit having an operating state determined by the initial enable signal, wherein in response to the initial enable signal representing a detected keycard the load switch circuit is enabled to provide a dc output voltage, *wherein if no initial enable signal is present the load switch circuit is disabled such that no dc output voltage is provided*; and

*an electronic door lock circuit operably connected to receive dc power when the load switch circuit is enabled*, wherein the electronic door lock circuit receives identification input from a keycard reader and generates in response an output that is provided to a locking mechanism, wherein in response to completing a keycard detection operation the electronic door lock circuit generates a turn-off signal that is provided in feedback to the ON/OFF circuit to disable the load switch circuit;

wherein the ON/OFF circuit includes a switch connected between a dc input and the load switch circuit, wherein the initial enable signal is generated in response to a keycard mechanically

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<sup>2</sup> Our Decision refers to the Final Office Action mailed July 14, 2014 ("Final Act."); Appellants' Appeal Brief filed Jan. 14, 2015 ("Br."); the Examiner's Answer mailed June 16, 2015 ("Ans."); and, the original Specification filed Oct. 6, 2011 ("Spec.").

contacting and closing the switch such that the dc input is provided to enable the load switch circuit.

*Rejections on Appeal*

Claims 1, 9, and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauer et al. (US 2003/0137399 A1; published July 24, 2003) (“Bauer”), Denison et al. (US 2005/0077998 A2; published Apr. 14, 2005) (“Denison”), and Levasseur (US 5,892,298; issued Apr. 6, 1999) or Sornes (US 4,519,228; issued May 28, 1985). Final Act. 2–5.

Claims 3, 4, 12, 17, and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauer, Denison, Levasseur (or Sornes), and Connors et al. (US 2005/0093374 A1; published May 5, 2005) (“Connors”). Final Act. 5–7.

Claims 7, 8, 14–16, 21, and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauer, Denison, Levasseur (or Sornes), and Wiemeyer (US 2005/0195067 A1; published Sept. 8, 2005). Final Act. 7.

Claims 5, 6, 13, 18, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauer, Denison, Levasseur (or Sornes), and Jung et al. (US 2008/0136594 A1; published June 12, 2008) (“Jung”). Final Act. 7–8.

Claim 20 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauer, Denison, Levasseur (or Sornes), and Chun (US 2005/0032490 A1; published Feb. 10, 2005). Final Act. 8–9.

## ANALYSIS

We have reviewed the Examiner’s rejections in light of Appellants’ arguments in the Appeal Brief and are not persuaded the Examiner has erred. Unless otherwise indicated, we adopt as our own the findings and reasons set forth by the Examiner in the Final Office Action from which this appeal is taken (Final Act. 2–9) and in the Examiner’s Answer (Ans. 4–10), and we concur with the conclusions reached by the Examiner. For emphasis, we consider and highlight specific arguments as presented in the Appeal Brief.

### *Rejection of Claims 1, 9, and 10<sup>3</sup> under § 103(a)*

Regarding claim 1, Appellants argue “neither Bauer nor Denison discloses ‘wherein if no initial enable signal is present the load switch circuit is disabled such that no dc output voltage is provided; and an electronic door lock circuit operably connected to receive dc power when the load switch circuit is enabled,’” as recited in claim 1, because “[t]he electronic door lock circuits in Bauer and Denison both require some power drain, even in sleep mode.” Br. 5. We are not persuaded by this argument. First, we agree with the Examiner that Bauer teaches the disputed limitations of claim 1. *See* Ans. 4 (citing Bauer ¶¶ 27–28, Fig. 3). Second, Appellants’ argument is not persuasive because neither the disputed limitations, nor any other limitations, of claim 1 recite there is “no power drain” in the sleep mode or when the load switch circuit is disabled. *In re Self*, 671 F.2d 1344, 1348 (CCPA 1982) (“[A]ppellant’s arguments fail from the outset because . . . they are not based on limitations appearing in the claims.”).

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<sup>3</sup> These claims are rejected under the first-stated ground of rejection listed above.

Regarding claim 10, Appellants argue “neither Bauer nor Denison discloses ‘operating an electronic door lock circuit in a no power mode in which a load switch circuit is disabled to prevent power from being supplied to the electronic door lock circuit,’” because the circuits in Bauer and Dennison “both require some power drain, even in sleep mode.” *See* Br. 6–7. For the same reasons discussed *supra* regarding claim 1, we are not persuaded by Appellants’ argument regarding claim 10.

Thus, we sustain the Examiner’s rejection of claims 1 and 10. We also sustain the rejection of claims 4, 7, and 9, and claim 15, which depend from claims 1 and 10, respectively, and are not separately argued. Because we sustain the rejection of claim 10, we also sustain the Examiner’s rejection of claim 14, which Appellants argue is patentable by virtue of dependency on claim 10. *Id.* at 10–11.

*Rejection of Claim 3, 12, and 17<sup>4</sup> under § 103(a)*

Regarding claim 3, Appellants argue Connors does not disclose “electronic door lock circuit, in response to receiving dc power from the load switch circuit provides an enable signal to the input of the load switch circuit to maintain the load switch circuit in the enabled state after the switch is opened in response to the keycard being removed.” Br. 7. Appellants also argue the Examiner erred by stating the improvement of Connors “could” be applied to the combined process of Bauer and Denison because “[t]he Examiner must establish that one of ordinary skill in the art ‘would’ combine the teachings of the references.” *Id.* at 8.

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<sup>4</sup> These claims are rejected under the second-stated ground of rejection listed above.

We are not persuaded by Appellants' arguments that the Examiner erred. First, Appellants attack Connors individually and fail to address the Examiner's actual rejection to establish an insufficiency in the combined teachings of the references. "Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references." *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). The relevant inquiry is whether the claimed subject matter would have been obvious to those of ordinary skill in the art in light of the combined teachings of the references. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981).

Here, the Examiner finds that the combined teachings of Bauer, Connors, Denison, and Levasseur teach or suggest the disputed limitation of claim 3. *See* Final Act. 3–7; Ans. 5–6 (citing Bauer ¶¶ 27, 28, 30; Connors ¶¶ 23–24, Figs. 1, 2; Levasseur 2:51–65, Fig. 1). In particular, the Examiner finds Bauer<sup>5</sup> teaches "that the electronic door lock circuit (microcontroller 38), in response to receiving dc power from the load switch circuit (via high-side switch 60) provides an enable signal to the input of the load switch circuit to maintain the load switch circuit in enabled state after the switch is opened." Ans. 5. The Examiner finds Connors teaches

that an electronic circuitry 112 in response to receiving a dc power from a power control circuit (load switch) provides an enable signal to the input of the power control circuit to maintain the power control circuit 116 in enabled state and after the power is removed from the power control circuit, such that the power control circuit is maintained in the enabled state until the

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<sup>5</sup> In line 9 on page 5 of the Answer, the Examiner mistakenly refers to Denison instead of Bauer.

circuitry 112 has completed an operation and generates a turn-off signal.

*Id.* at 6 (citing Connors ¶¶ 23–24, Figs. 1, 2). Appellants did not file a Reply Brief and have not rebutted these findings. Thus, for the reasons stated by the Examiner, we find a preponderance of the evidence supports the Examiner’s findings that the combined teachings of the references teach or suggest the disputed limitation of claim 3.

Second, regarding the combination of the references, the Examiner finds as follows:

Connors discloses that a power control circuit is used to substantially disconnect a power source from a circuit in an off mode for minimizing power consumption in the off mode. So it would have been obvious to one having ordinary skill in the art to modify the combination of Bauer, Denison, Levasseu[r] (or Sornes) to include the functionality of keeping the microcontroller in the ON state by keeping the power control circuit active until the microcontroller performs one or more predetermined functions as taught by Connors (see paragraphs [0023]-[0024]) in order to extend the battery life.

Ans. 6.

The Examiner also finds the results of applying Connors to the combination of Bauer and Denison “would have been predictable and resulted in maintaining a switch in the on state until the circuitry performs a predetermined operation.” Final Act. 6; Ans. 7 (emphasis omitted). Thus, we find the Examiner provides sufficient articulated reasoning having a rational underpinning, such that a person of ordinary skill in the art would have been motivated to combine the teachings of Connors, Bauer, Denison, and Levasseur so as to render obvious the subject matter of claim 3. *See KSR Int’l Co. v. Teleflex Co.*, 550 U.S. 398, 418 (2007).

Regarding claim 12, Appellants argue:

There is no citation to where Connors discloses “applying a dc output provided by the electronic door lock circuit in feedback to the enable pin of the load switch circuit to maintain the load switch circuit in the enabled state during the determination of whether the electronic door lock should be unlocked.”

Br. 8–9. Regarding claim 17, Appellants argue,

There is no citation to where Connors discloses “a load switch circuit having an operating state determined by a signal applied to an enable pin of the load switch circuit[,]” the interaction of the detected keycard to the enable pin or the interaction of the microcontroller with the enable pin, all recited in claim 17.

Br. 9–10. For the same reasons discussed *supra* regarding claim 3, we are not persuaded by Appellants’ arguments that the Examiner erred in rejecting claims 12 and 17.

Thus, we sustain the Examiner’s rejection of claims 3, 12, and 17, as well as the rejection of claim 23, which depends from claim 17 and is not separately argued. *See id.* Because we sustain the rejection of claim 17, we also sustain the rejection of claim 22, which Appellants argue is patentable by virtue of dependency on claim 17. *See* Br. 12.

*Rejection of Claim 8, 16, and 21<sup>6</sup> under § 103(a)*

Regarding claim 8, Appellants argue Wiemeyer does not teach “dc power to a keycard reader that is selectively removed in response to identification data being received from the keycard reader” because it does not teach the conditional statement that power to the keycard reader is “selectively removed.” Br. 10. We are not persuaded by Appellants’ argument. Instead, we agree with the Examiner that Wiemeyer teaches

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<sup>6</sup> These claims are rejected under the third-stated ground of rejection listed above.

selectively removing the power in response to data being received from the reader because Wiemeyer teaches “the microprocessor 230 enables the supply of batter[y] operating power to the token reader 210 and receives the read token data. The microprocessor then removes operating power from the reader 210.” Ans. 7 (citing Wiemeyer ¶¶ 9–24). Thus, we sustain the Examiner’s rejection of claim 8.

Regarding claim 16, Appellants argue that Wiemeyer does not disclose the order of events in the limitation reciting “selectively removing power from the keycard reader subsequent to receiving data retrieved from the keycard but prior to generating the self turn-off signal.” Br. 11. Appellants make the same argument in regard to claim 21, which recites a substantially similar limitation to the limitation of claim 16. We are not persuaded by Appellants’ arguments because they attack Wiemeyer individually, rather than the combined teachings of Bauer, Denison, and Wiemeyer on which the Examiner’s rejection is based. *See* Final Act. 3–4, 7 (citing Bauer ¶ 28, Fig. 3; Denison ¶ 81, Figs. 6, 7); Ans. 9–10 (citing Wiemeyer ¶¶ 9, 24); *see In re Merck*, 800 F.2d at 1097. For the reasons stated by the Examiner, we find a preponderance of the evidence supports the Examiner’s finding that the combination of Bauer, Denison, and Wiemeyer teaches or suggests the disputed limitations of claims 16 and 21. Thus, we sustain the Examiner’s rejection of claims 16 and 21.

*Rejection of Claims 5, 6, 13, 18, and 19<sup>7</sup> under § 103(a)*

Appellants argue (1) claims 5 and 6 are patentable by virtue of dependency on claim 1, (2) claim 13 is patentable by virtue of dependency on

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<sup>7</sup> These claims are rejected under the fourth-stated ground of rejection listed above.

claim 10, and (3) claims 18 and 19 are patentable by virtue of dependency on claim 17. *See* Br. 12. We are not persuaded by Appellants' arguments because, for the reasons discussed *supra* regarding claims 1, 10, and 17, we agree with the Examiner's findings that claims 1, 10, and 17 are not patentable over the combination of the cited references. Thus, we sustain the Examiner's rejection of claims 5, 6, 13, 18, and 19.

*Rejection of Claim 20<sup>8</sup> under § 103(a)*

Appellants argue that claim 20 is patentable by virtue of dependency on claim 17. *See* Br. 13. We are not persuaded by Appellants' arguments because, for the reasons discussed *supra* regarding claim 17, we agree with the Examiner's finding that claim 17 is not patentable over the combination of the cited references. Thus, we sustain the Examiner's rejection of claim 20.

DECISION

We affirm the Examiner's rejections of claims 1, 3–10, and 12–23 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

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<sup>8</sup> Claim 20 is rejected under the fifth-stated ground of rejection listed above.