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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/696,772	04/05/2007	Jian Xu	075017-0277	5106
48329	7590	03/05/2013	EXAMINER	
FOLEY & LARDNER LLP 3000 K STREET N.W. SUITE 600 WASHINGTON, DC 20007-5109			MAI, TIEN HUNG	
			ART UNIT	PAPER NUMBER
			2836	
			MAIL DATE	DELIVERY MODE
			03/05/2013	PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JIAN XU and JEFFREY IOTT

Appeal 2010-006979
Application 11/696,772
Technology Center 2800

Before BRUCE R. WINSOR, BARBARA A. BENOIT, and
JAMES B. ARPIN, *Administrative Patent Judges*.

BENOIT, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) from the rejection of claims 1 and 3-24, which constitute all the claims pending in the application. Claim 2 has been canceled. App. Br. 2. We have jurisdiction under 35 U.S.C. § 6(b). We affirm-in-part.

STATEMENT OF THE CASE

Appellants' invention stops dimming of the power to an electrical outlet when an inductive load is sensed. *See generally* Abstract. This prevents damage to the load. *Id.* Claim 11 is illustrative and reads as follows with key disputed limitations emphasized:

11. A method of operating a lighting control circuit comprising the steps of:

providing a dimmer circuit, and dimming the power provided to an electrical outlet; and

sensing the presence of an inductive load in the electrical outlet by identifying a voltage spike and *stopping dimming power when an inductive load is sensed.*

The Rejections

1. The Examiner rejected claims 1, 9-11, 22, and 23 under 35 U.S.C. § 103(a) as unpatentable over Schanin (US 5,239,255; issued Aug. 24, 1993) and Young (US 5,838,127; issued Nov. 17, 1998). Ans. 3-5.¹

2. The Examiner rejected claims 3-6 and 12 under 35 U.S.C. § 103(a) as unpatentable over Schanin, Young, and Kadwell (US 5,365,146; issued Nov. 15, 1994). Ans. 5-7.

3. The Examiner rejected claim 7 under 35 U.S.C. § 103(a) as unpatentable over Schanin, Young, Kadwell, and Hudson (US 6,940,416 B2; issued Sept. 6, 2005). Ans. 7.

4. The Examiner rejected claim 8 under 35 U.S.C. § 103(a) as unpatentable over Schanin, Young, Kadwell, and Kimura (US 5,189,638; issued Feb. 23, 1993). Ans. 7-8.

¹ Throughout this opinion, we refer to the Appeal Brief filed October 8, 2009 (App. Br.), the Examiner's Answer mailed January 7, 2010 (Ans.), and the Reply Brief filed March 5, 2010 (Reply Br.).

5. The Examiner rejected claims 13, 14, 21, and 24 under 35 U.S.C. § 103(a) as unpatentable over Schanin, Young, and Sid (US 7,355,523 B2; filed Apr. 15, 2004). Ans. 8-9.

6. The Examiner rejected claims 15-18 under 35 U.S.C. § 103(a) as unpatentable over Schanin, Young, Sid, and Kadwell. Ans. 10.

7. The Examiner rejected claim 19 under 35 U.S.C. § 103(a) as unpatentable over Schanin, Young, Sid, Kadwell, and Hudson. Ans. 10-11.

8. The Examiner rejected claim 20 under 35 U.S.C. § 103(a) as unpatentable over Schanin, Young, Sid, Kadwell, and Kimura. Ans. 11-12.

OBVIOUSNESS REJECTION OVER SCHANIN AND YOUNG

Claims 1, 10, 11, 22, and 23

Regarding illustrative independent claim 11, which Appellants argue with claim 1 (App. Br. 5-6), the Examiner concludes Schanin and Young collectively teach or suggest stopping dimming power when an inductive load is sensed. Ans. 4-5. The Examiner relies on Schanin for sensing the presence of an inductive load in the electrical outlet by identifying a voltage spike. Ans. 4-5. The Examiner relies on Young's control circuit configured to compare an output voltage with an under-voltage limit, and, if the output voltage is below the limit, the control circuit disables a motor, thus stopping dimming an electrical output in an undervoltage condition. Ans. 5. Further, the Examiner concludes that it would have been obvious to employ Young's under-voltage detection circuit in Schanin's power modulation system "because it is well known in the art that the motor could heat up or catch fire if the power supply is in an under-voltage condition." Ans. 5.

Appellants do not challenge the Examiner's findings regarding the recited components taught by Schanin or Young's teaching of an under-voltage detection circuit. *See generally* App. Br. 5-6; Reply Br. 1-2.

Instead, Appellants raise the following issues:

1. Under § 103, has the Examiner erred in rejecting claim 11 by finding that Schanin and Young collectively would have taught or suggested "stopping dimming power when an inductive load is sensed"?

2. Under § 103, is the Examiner's reason to combine the teachings of Schanin and Young supported by articulated reasoning with some rational underpinning to justify the Examiner's obviousness conclusion?

Schanin describes a power modulation system that, when an inductive load sensor detects the presence of an inductive load, switches modes to protect the system and avert the necessity of a shutdown. *See* Schanin, Abstract. Schanin's "switch protector detects circuit-threatening conditions and provides for a protective response thereto, which can include shutdown." Schanin, col. 4, ll. 3-5. Young discloses a control circuit 122 that disables a motor in response to a detected undervoltage condition. Young, col. 8, ll. 63-67; Fig. 1. According to the Examiner, the combination of Schanin's system with Young's control circuit would yield: "a dimming circuit that uses [two modes] to avoid shut down when possible (e.g. dimming a fluorescent lamp, [Schanin,] column 4, lines 65-66), but also provides the ability to shut down based upon circuit threatening conditions where avoiding shut down is not possible." Ans. 12-13.

On the record before us, we are not persuaded of error in the Examiner's rejection of illustrative independent claim 11. Appellants argue that the proposed combination would not stop dimming power when an

inductive load is sensed because “an inductive load does not correspond to an overvoltage/undervoltage condition.” Reply Br. 2; *see also* App. Br. 5-6. Appellants’ argument focuses unduly on the specific structures present in the prior art, and Appellants seem to argue that the combination would require a physical substitution of Schanin’s inductive load for Young’s undervoltage condition. This is not persuasive because a determination of obviousness based on teachings from multiple references does not require an actual, physical substitution of elements from one reference into another reference. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981) (“The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference . . .”). Rather, the test for obviousness is “what the combined teachings of the references would have suggested to those of ordinary skill in the art.” *Keller*, 642 F.2d at 425.

We are not persuaded by Appellants’ arguments that the proposed combination is improper because (i) the Examiner’s proposed combination of Schanin and Young predictably uses prior art elements according to their established functions—an obvious improvement and (ii) the Examiner has articulated a reason with some rational underpinning for combining the references (Ans. 9) to support a conclusion of obviousness. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

Appellants’ arguments regarding the proposed combination do not squarely address – much less persuasively rebut – the Examiner’s position (Ans. 12-13) that the combination would use two modes when possible to avert a shutdown but would shut down when necessary to protect the circuit. Contrary to Appellants’ contentions, the proposed modification would not destroy Schanin’s functionality that provides power in two modes (App. Br.

5) or would yield a dimming circuit unable to dim a fluorescent lamp (App. Br. 6; Reply Br. 2). We agree with the Examiner's explanation of how the teachings of Schanin and Young may be combined. Thus, we are not persuaded by Appellants' contention that the "disable" approach of Young is not compatible with the continued operation approach of Schanin. App. Br. 6.

Nor are we persuaded that the disclosure of Schanin teaches away from a shutdown in response to detection of an inductive load, as Appellants contend (App. Br. 6; Reply Br. 2). The Examiner's proposed modification would not defeat Schanin's objective of providing a protective response to circuit-threatening conditions. Appellants have not provided adequate evidence concerning Schanin that discredits the combination or would have discouraged an ordinarily skilled artisan from combining stopping dimming when an undervoltage condition is sensed (as taught by Young) with Schanin's teaching, to stop dimming when an inductive load is sensed.

We therefore sustain the rejection of (1) independent claim 11, (2) independent claim 1 argued with claim 11, and (3) dependent claims 10, 22, and 23, which were not argued separately with particularity.

Claim 9

Claim 9, which depends from claim 1, recites that "the electrical output is an electrical outlet." The Examiner relies on Schanin's disclosure of a load 114 as inherently disclosing an electrical outlet to connect to the load. Ans. 4. In response to Appellants' challenge, the Examiner explains that Schanin's disclosure of an embodiment of a fluorescent lamp as a load inherently discloses an electrical outlet because "some type of electrical outlet would be necessarily present." Ans. 13. Appellants assert, without

providing any evidence, that fluorescent lamps do not necessarily have an outlet according to “[t]he commonly understood meaning of an electrical outlet [as] a receptacle that receives the prongs that extend from a power cord” because fluorescent lamps “are often hardwired into an AC circuit in a home.” Reply Br. 3.

We are not persuaded. First, mere speculation unsupported by factual evidence is entitled to little probative weight. *Cf. In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997). Moreover, Appellants’ unsupported assertion contradicts a technical dictionary definition of an outlet as “[a] point on the wiring system at which current is taken to supply utilization equipment.” IEEE 100 THE AUTHORITATIVE DICTIONARY OF IEEE STANDARDS TERMS 778 (7th ed. 2000). Further, this IEEE definition of “outlet” supports the Examiner’s conclusion that Schanin’s load (i.e., a fluorescent lamp) necessarily discloses an electrical outlet.

Moreover, Appellants do not provide a definition in their Specification that would otherwise limit the scope of the claim term “electrical outlet” to a receptacle that receives the prongs that extend from a power cord. Thus, the weight of the evidence on this record favors the Examiner’s position that some type of electrical outlet would be necessarily present in Schanin’s disclosure of a fluorescent lamp as an embodiment of a load.

We therefore sustain the rejection of dependent claim 9.

OBVIOUSNESS REJECTION OVER SCHANIN,
YOUNG, AND KADWELL

Claim 3, which depends from claim 1, additionally recites that “a line is provided parallel to the electrical output,” among other additional limitations. The Examiner finds that Schanin teaches this feature in the line having resistors R13 and R14 in Figure 6.

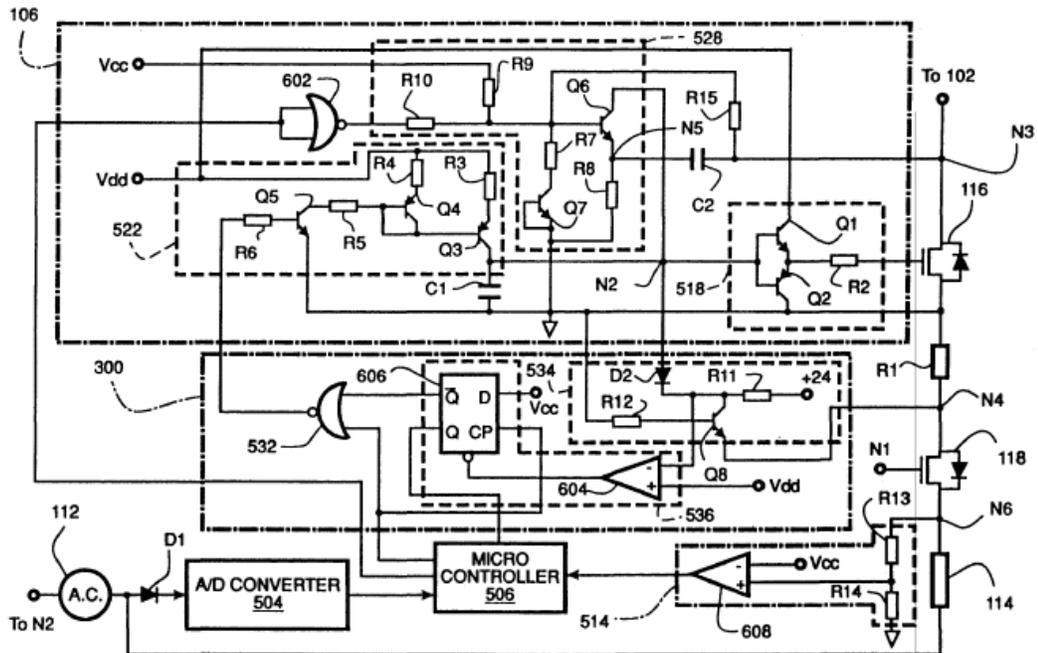


Figure 6

Figure 6 of Schanin above shows a line having resistors R13 and R14.

Appellants argue that, although the line in Figure 6 connects to a node (N6) above load 114, the line is not connected to a node below load 114; therefore, this line is not parallel to the electrical output from load 114. Rather, Appellants assert that the line is connected to ground. In response, the Examiner maintains that the line is in parallel to the electrical output because the load is also connected to ground, while acknowledging that this is not shown in Figure 6. Because the line having resistors R13 and R14 is

not shown to be connected to a node below load 114, and because Figure 6 does not show the load being connected to ground, we agree with Appellants that the Examiner has not established that the line having resistors R13 and R14 in Schanin's Figure 6 is parallel to the electrical output from load 114.

We therefore do not sustain the rejection of (1) claim 3, (2) claims 4-6 which depend directly or indirectly from claim 3, and (3) claim 12, which depends from independent claim 11 and also recites "a line is provided parallel to the electrical output," for similar reasons.

OBVIOUSNESS REJECTION OVER SCHANIN, YOUNG, AND SID

Regarding independent claim 13, Appellants repeat their arguments regarding why Schanin and Young are not combinable. App. Br. 10. For the reasons explained with regard to claim 11, we are not persuaded of error in the Examiner's combination of the teachings of Schanin and Young.

Appellants also argue that Sid, which is cited as disclosing plural input members for directing a user control signal to a controller (Ans. 9), is improperly combined with Schanin and Young because the Examiner (i) does not provide support for the Examiner's assertion that it is well known that a remote control provides convenience, (ii) does not explain why one would adapt the combination of Schanin and Young to include such a feature, and (iii) does not explain how such a modification would be accomplished. App. Br. 10.

We are not persuaded of Examiner error. Sid's disclosure is directed to a remote controlled lighting system. *See* Sid, Abstract, Title; *see also* Ans. 9 (citing Sid, Figs. 3-5). The Examiner relied on Sid merely for the limited purpose of teaching that input members of a remote control for

directing a user control signal to a controller were known to ordinarily skilled artisans. Ans. 9. The Examiner's proposed combination of Schanin, Young, and Sid predictably uses prior art elements according to their established functions—an obvious improvement, and the Examiner has articulated a reason with some rational underpinning for combining the references (Ans. 9) to support the conclusion of obviousness. *See KSR*, 550 U.S. at 418. Moreover, the Examiner correctly notes that a reason for combining references need not be explicit in a reference. Ans. 15.

We therefore sustain the rejection of independent claim 13, and its dependent claims 21, and 24, which were not separately argued with particularity.

Regarding dependent claim 14, Appellants rely on their arguments made with regard to claim 13. Appellants also repeat their arguments discussed previously with respect to claim 9 concerning the recited limitation “the electrical output is an electrical outlet.” For the reasons discussed above with respect to claims 9 and 13, we find Appellants' arguments unpersuasive. We therefore sustain the rejection of claim 14.

THE REMAINING OBVIOUSNESS REJECTIONS

Regarding the rejection of claim 7 as unpatentable over Schanin, Young, Kadwell, and Hudson and the rejection of claim 8 as unpatentable over Schanin, Young, Kadwell, and Kimura, the Examiner has not shown that Hudson, Kadwell, or Kimura would remedy the deficiencies noted above regarding claim 3, from which each of claims 7 and 8 indirectly depend. Accordingly, we do not sustain the obviousness rejections of claims 7 and 8 for similar reasons.

Claims 15-18 have been rejected as unpatentable over Schanin, Young, Sid, and Kadwell. Claim 15 requires providing a line parallel to the electrical outlet, and claims 16-18 depend directly or indirectly from claim 15. For the reasons discussed above with respect to claim 3, we are persuaded of Examiner error. Because the Examiner has not shown that Sid or Kadwell would remedy the deficiencies of Schanin and Young noted above with regard to claim 3, we do not sustain the rejection of claims 15-18 for similar reasons.

Claims 19 and 20 also depend indirectly from claim 15. Because the Examiner has not shown that Hudson or Kimura would remedy the deficiencies of Schanin, Young, Sid, or Kadwell noted above with regard to claim 15, we do not sustain the rejection of claims 19 and 20 for similar reasons.

CONCLUSION

Under § 103, the Examiner did not err in rejecting claims 1, 9-11, 13, 14, and 21-24 but did err in rejecting claims 3-8, 12, and 15-20.

ORDER

The Examiner's decision rejecting claims 1, 9-11, 13, 14, and 21-24 is affirmed. The Examiner's decision rejecting claims 3-8, 12, and 15-20 is reversed.

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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-IN-PART

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