

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YASUHIRO SAKAI

Appeal 2008-5941
Application 10/382,464
Technology Center 2600

Decided: December 11, 2008

Before JOSEPH F. RUGGIERO, JOHN A. JEFFERY, and CARLA M.
KRIVAK, *Administrative Patent Judges*.

JEFFERY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134 from the Examiner's rejection of claims 16 and 17. Claims 1-15 and 18-21 have been indicated as containing allowable subject matter (Ans. 3). We have jurisdiction under 35 U.S.C. § 6(b). We reverse. However, we enter a new ground of rejection under 37 C.F.R. § 41.50(b).

STATEMENT OF THE CASE

Appellant invented a security device to detect a burglary. When an intrusion occurs, an impact member strikes a piezoelectric element. In turn, the motions of the element from the impact are converted to electrical energy. This energy triggers an alarm to indicate the intrusion.¹

Independent claim 16 is reproduced below:

16. A security device, comprising:

a generator member having a housing;

a piezoelectric member being mounted to an interior of the housing; and

an impact member being movably contained inside the housing, the impact member moving inside the housing from a first position not contacting the piezoelectric element to a second position contacting the piezoelectric element to generate electricity;

wherein a status change is detected, and a power produced by the generator member is used to raise an alarm.

The Examiner relies upon the following as evidence in support of the rejection:

Miller	US 5,684,457	Nov. 4, 1997
Olney	US 5,934,882	Aug. 10, 1999

(1) Claim 16 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Miller.

¹ See generally Spec. 1:5-7, 2:23-3:1, 3:15-19, 15:14-20, and 22:16-23:22.

(2) Claim 17 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Miller and Olney.

Rather than repeat the arguments of Appellant or the Examiner, we refer to the Briefs and the Answer² for their respective details. In this decision, we have considered only those arguments actually made by Appellant. Arguments which Appellant could have made but did not make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

ANTICIPATION REJECTION

The Examiner finds that Miller discloses the limitations of claim 16, including a generator member having a housing, a piezoelectric member mounted to the interior of the housing, and an impact member movably contained inside the housing (Ans. 5). Appellant argues Miller does not disclose a single embodiment having (1) a generator system with a housing, (2) a piezoelectric member being mounted to the housing interior, (3) an impact member being movably contained inside the housing, and (4) power produced by the generator member used to raise the alarm (App. Br. 10-17; Reply Br. 8-13).

² Throughout the opinion, we refer to (1) the most recent Appeal Brief filed October 6, 2006, (2) the Examiner's Answer mailed January 10, 2007, and (3) the Reply Brief filed February 22, 2007.

ISSUE

The following issue has been raised in the present appeal:

Has Appellant shown the Examiner erred in finding Miller discloses a generator member having a housing, a piezoelectric member mounted to the housing's interior, and an impact member being movably contained inside the housing in rejecting claim 16 under § 102?

FINDINGS OF FACT

The record supports the following findings of fact (FF) by a preponderance of the evidence.

1. Miller discloses a computerized combination lock assembly 10 for use with a tampering indication system. Tampering is indicated on the lock at display 7 (Miller, col. 1, ll. 8-12, col. 3, ll. 46-54, and col. 4, ll. 1-3; Figs. 1 and 2).
2. Miller discloses the lock assembly 10 includes a lock casing 9 containing the computerized combination lock mechanism and its components and circuitry, including microprocessor 38, for operating the computerized combination lock. Miller states further description of the components and circuitry is not necessary to understand the invention (Miller, col. 3, ll. 54-58 and 62-67 and col. 4, ll. 48-49).
3. Miller states the computerized combination lock mechanism is not shown (Miller, col. 3, ll. 55-56).
4. Miller discloses the tamper indication system 20 includes a snap action powered generation system 21 containing its elements in a box and a power generation element system 33 separate from system 21. The piezoelectric element 39 is part of power generation element 33

- (Miller, col. 2, ll. 66 and 67 and col. 4, ll. 28, 45, and 52-54; Figs. 2 and 3a).
5. In one embodiment of the powered generation system 21 and the power generation element system 33, a protrusion 27 on the deadbolt 15 moves pin 23, which in turn moves impact member 31 in the direction of arrow X. The member 31 strikes a piezoelectric element 39 (Miller, col. 2, ll. 66 and 67 and col. 4, ll. 28-49 and 52-63; Fig. 3a).
 6. In an alternative embodiment of the powered generation system 21 and power generation element 33, a deadbolt 15' interacts with a latch bar 167' having a strike 175. The strike 175 contacts a piezoelectric member 39 (Miller, col. 9, ll. 6-11; Fig. 13b).

PRINCIPLES OF LAW

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of Calif.*, 814 F.2d 628, 631 (Fed. Cir. 1987). “Inherency . . . may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (citations omitted).

ANALYSIS

Miller depicts a tamper indication system or security device for use with a computerized combination lock (FF 1). The computerized combination lock assembly 10 includes a lock casing 9, which constitutes a

housing (FF 2). Miller discloses the components and circuitry of the computerized combination lock mechanism are in the housing 9 but further indicates that a description of these components and circuitry is not necessary to understand the invention (*Id.*) Miller also states the computerized combination lock mechanism is not shown (FF 3). Thus, from Miller's discussion, we must presume that the components and circuitry described and shown in the remaining portions of Miller are describing the tamper indication system and not the components and circuitry of the computerized combination lock and locking mechanism contained in housing 9 (FF 2).

In one embodiment, the tampering system includes a powered generation system 21 with an impact member 31 and power generation element system 33 with a piezoelectric member 39 (FF 5). In an alternative embodiment, the system includes a powered generation system 21 with a latch bar 167' having an impact member 175 and a power generation element system 33 having a piezoelectric member 39 (FF 6). The only common structural features in these tamper indication systems' embodiments with Figure 1 are the deadbolt 15 or 15' and microprocessor 38 (FF 2, 5, and 6). Miller fails to address specifically where the remaining elements and circuitry of the tamper indication system are located. While there is a high probability that all the components of the powered generation system 21 and pulse generation element system 33 are within housing 9, we cannot say with certainty all the components are necessarily within this housing. For example, the impact member 31 may be outside or slide outside the housing 9 and may strike the piezoelectric member 39 outside the housing. As another example, the piezoelectric member 39 may not be

mounted to an interior of the housing 9 as recited in claim 16. The mere fact that the systems 21 and 33 *may* be within the housing 9 is not sufficient to demonstrate a reference anticipates a claim limitation. *Robertson*, 169 F.3d at 745.

Alternatively, Figure 2 of Miller shows the powered generation system 21 has a housing or a box containing all its components (FF 4). However, Figures 2 and 3 of Miller show the pulse generation element system 33 is not within this housing, and, in particular, piezoelectric member 39 is not within this housing (*Id.*) Thus, the piezoelectric member 39 is also not shown to be mounted to the interior of this box or housing.

Lastly, the Examiner states that Miller describes “[t]he computerized combination lock mechanism is shown [as] number 20 in Figure 2 including a snap action motion generation system 21 to generate electrical power” (Ans. 7) (emphasis omitted). Like Appellant (Reply Br. 6), we cannot find this sentence in Miller. Moreover, as Appellant argues (Reply Br. 7), Miller describes system 20 as a tamper indicator (FF 1 and 4) and not a computerized lock mechanism. Miller also states the computerized lock mechanism is not shown (FF 2). Thus, any description of element 20 in Miller must describe the tamper indicator and not the computerized lock mechanism.

In summary, Miller fails to anticipate the combined claim limitations of the generator member having a housing, the piezoelectric member mounted to an interior of the housing, and an impact member movably contained within the housing as required by claim 16.

For the above reasons, Appellant has shown the Examiner erred in rejecting claim 16 under 35 U.S.C. § 102(b) based on Miller.

OBVIOUSNESS REJECTION

Olney does not cure Miller's deficiency to show all the recited components are mounted to or movably contained inside the housing as recited. Thus, for the same reasons discussed with regard to claim 16, Appellant has shown the Examiner erred in rejecting claim 17 under 35 U.S.C. § 103(a) as being unpatentable over Miller and Olney.

New Ground of Rejection Under 37 C.F.R. § 41.50(b)

Under 37 C.F.R. § 41.50(b), we enter a new ground of rejection for claim 16 under 35 U.S.C. § 103. The following additional findings of fact are relevant to the new ground of rejection.

ADDITIONAL FINDINGS OF FACT

The record supports the following additional findings of fact (FF) by a preponderance of the evidence.

7. Linkage 31 of the powered generation system 21 interfaces with the power generation element system 33 to produce electrical power to the memory and sequence element 37 (Miller, col. 4, ll. 44-46).
8. The power supplied to the memory and sequence element 37 interfaces with the microprocessor 38 for displaying when the lock has been tampered (Miller, col. 4, ll. 47-51)
9. The Specification of the present application describes and shows the piezoelectric member 21 is mounted to the housing interior through cushion material 25 (Spec. 23:2-6; Fig. 3).

10. Microprocessor 38 is both the microprocessor for the computerized combination lock and for the tampering indication system (Miller, col. 3, ll. 63 and 64 and col. 4, ll. 48 and 49).

Claim 16 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Miller. Miller discloses a security device that indicates tampering of a lock on display 7 (FF 1). Miller discloses the lock assembly 10 has a housing 9 and is used with the tamper indication system (*Id.*). Miller also teaches the tamper indication system 20 has a generator member (e.g., 21 and 33), a piezoelectric member 39, and an impact member 31 or 175 moving from a first position that is not in contact with the piezoelectric member 39 to a second position that is in contact with the member 39 (FF 1 and 4-6). Miller does not explicitly disclose the combination of the generator member having a housing, the piezoelectric member being mounted to the interior of the housing, and the impact member being movably contained inside the housing as recited in claim 16.

However, as Miller discloses microprocessor 38 is both the microprocessor for the computerized combination lock and for the tampering indication system (FF 10), Miller teaches one component of the tamper indicator is housed within housing 9 (FF 2). Miller further teaches the components and circuitry of the computerized combination lock are contained within a housing (*Id.*) Thus, based on Miller's suggestion, one skilled in the art would have recognized containing all components of a system, including the tamper indication system 20, within the same housing would equally improve the tamper indication system 20 in a similar manner. *KSR Int'l. Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1740 (Fed. Cir. 2007).

Moreover, in formulating an obviousness rejection, the teachings do not have to be found explicitly in the prior art reference and a showing can come from the background knowledge of an ordinarily skilled artisan and the nature of the problem to be solved. *KSR*, 127 S. Ct. at 1740-41; *see also In re Kahn*, 441 F.3d 977, 987-88 (citations omitted). Organizing components and circuitry into a housing would have been well known to ordinarily skilled artisans at the time of the invention to protect parts against damage, impact, and dust, and to provide a more compact design. Thus, using an ordinarily skilled artisan's background knowledge, one would have known to contain the circuitry and components of a system, including the generator member 21 and 33, the impact member 31 or 175, and a piezoelectric member 39 of Miller's tamper indicator 20, within a housing for the above reasons. An ordinarily skilled artisan would have also equally recognized including a housing (e.g., casing 9) for Miller's generator member (e.g., 21 and 33) to contain its components, such as the impact member 31 and piezoelectric member 39, within the housing. This would predictably result in protecting the components against damage, impact, and dust and provide a more compact design. *Id.* at 1739. The impact member (e.g., 31 in Fig. 2) would then be movably contained within the housing from a first non-contacting position to a second contacting position with the piezoelectric member as recited in claim 16.

As for the piezoelectric member being mounted to the housing as recited, the claim does not require the mounting to be direct. The Specification also does not show a direct connection of the piezoelectric element to the housing (FF 9). Thus, giving the claim its broadest reasonable construction in light of the Specification, we find the

piezoelectric member need only be indirectly mounted to the interior of the housing. As discussed above, Miller teaches and suggests containing components of a generator system within the same housing. Additionally, the piezoelectric member 39 is part of the generator system (e.g., 21 and 33) (FF 4 and 5). One skilled in the art would have therefore recognized that mounting the piezoelectric element of the generator member to an interior of the housing also protects against damage, impact, and dust and provides a more compact design.

Lastly, the limitation, “a power is produced by the generating member is used to raise an alarm” in claim 16 requires the power generated by the generator member be *used* in some fashion to raise an alarm. Miller teaches the linkage 31 interfaces with the generation member 33 to produce power (FF 7). This power, in turn, is supplied to the memory and sequence element 37, which interfaces with the microprocessor 38 for displaying or raising an alarm when the lock has been tampered (FF 7 and 8). Thus, contrary to Appellant’s assertions (App. Br. 16; Reply Br. 8 and 9), Miller discloses part of the generator member (i.e., piezoelectric element 39 of system 33) produces the power used to raise the alarm as recited in claim 16.

Although we decline to reject every claim under our discretionary authority under 37 C.F.R. § 41.50(b), we emphasize that our decision does not mean the remaining claim is patentable over Miller. Rather, we merely leave the patentability determination of claim 17 to the Examiner. *See* MPEP § 1213.02.

CONCLUSION

(1) For the foregoing reasons, Appellant has shown the Examiner erred in finding that Miller anticipates all the elements in claim 16.

(2) Miller, however, teaches and suggests all the limitations in claim 16 under 35 U.S.C. § 103(a).

DECISION

We have not sustained the Examiner's rejection of claims 16 and 17 on appeal. Therefore, the Examiner's decision rejecting claims 16 and 17 is reversed. We have, however, entered a new ground of rejection under 37 C.F.R. § 41.50(b) for independent claim 16.

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). This section provides that "[a] new ground of rejection... shall not be considered final for judicial review."

Section 41.50(b) also provides that the Appellant, **WITHIN TWO MONTHS FROM THE DATE OF THE DECISION**, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

Appeal 2008-5941
Application 10/382,464

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).

REVERSED
37 C.F.R. § 41.50(b)

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