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Diebold, Incorporated
c/o Black, McCuskey, Souers & Arbaugh, LPA
220 Market Avenue, South, Suite 1000
Canton, OH 44702

EXAMINER	
SHAPIRO, JEFFREY ALAN	

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte THOMAS KEMMERLING

Appeal 2019-003037
Application 15/212,727
Technology Center 3600

Before STEFAN STAICOVICI, JAMES P. CALVE, and LISA M. GUIJT, *Administrative Patent Judges*.

GUIJT, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant[1] seeks our review under 35 U.S.C. § 134(a) of the rejection of claims 1–5, 9, and 11–15. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

[1] We use the word "Appellant" to refer to "Applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies Wincor Nixdorf International GmbH as the real party in interest. Appeal Br. 3.

THE INVENTION

Appellant's invention relates to "a drum storage module for receiving notes of value, which comprises a winding drum onto which notes of value are windable so as to be received between at least two foil belts." Spec. ¶ 1. The sole independent claim on appeal, claim 1, which is reproduced below with disputed limitations emphasized, is illustrative of the subject matter on appeal.

> 1. A drum storage module for receiving notes of value, comprising:
>
> a winding drum having a longitudinal axis and on which the notes of value are windable so as to be received between at least two foil belts;
>
> a first sensor comprising a light source and a light receiver, wherein the light source and the light receiver are arranged so that a beam path from the light source to the light receiver extends parallel to the longitudinal axis of the winding drum;
>
> wherein the drum storage module comprises a housing enclosing the winding drum;
>
> wherein the light source and the light receiver are mounted directly on the housing enclosing the winding drum; and
>
> *wherein a first recess in the housing enclosing the winding drum receives the light source and a second recess in the housing enclosing the winding drum receives the light receiver*, the first and second recesses centered on the beam path and thereby parallel to the longitudinal axis of the winding drum.

THE REJECTIONS

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

NAME	REFERENCE	DATE
Chang	US 8,684,156 B1	Apr. 1, 2014
Robinson	US 2012/0103754 A1	May 3, 2012
Saltsov	US 2003/0116400 A1	June 26, 2003
Ohara	US 2014/0262678 A1	Sept. 18, 2014

The following rejections are before us for review:

1. Claims 1–5, 9, and 11–13 stand rejected under 35 U.S.C. § 103 as being unpatentable over Saltsov, Robinson, and Chang.

2. Claims 14 and 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Saltsov, Robinson, Chang, and Ohara.

OPINION

Rejection I

Regarding independent claim 1, the Examiner finds that Saltsov discloses a drum storage module (i.e., banknote accumulator 2), including a sensor comprising a light source and a light receiver (i.e., light transmitter 173, lens of light transmitter 175) "for determining the reaching and/or leaving of the maximum admissible filling level of notes of value in the drum storage module," wherein the sensor's beam path extends as claimed. Final Act. 2–3 (citing, *e.g.*, Saltsov ¶¶ 65, 66, Figs. 1, 12, 13); *see e.g.*, Saltsov ¶¶ 65, 66 (disclosing "sensing arrangement 171 for determining when the accumulator is essential[ly] full," including "light transmitter 173" and "[a] light receiver is positioned on the opposite side of the accumulator [for] receiv[ing] [a] beam of light when the stored banknotes do not interrupt

the beam"). The Examiner also finds that Saltsov discloses a storage module housing (i.e., hinged panel 8, panel 10, flanged end 11 of panel 10). Final Act. 3.

The Examiner finds that Saltsov does not disclose, *inter alia*, first and second recesses in a housing enclosing the winding drum for receiving the light source and light receiver, respectively, as required by claim 1, and the Examiner relies on Chang for teaching a light emitter 241 and a light receiver (i.e., light sensor 242) mounted directly on a housing 1, "via holding base [21]." Final Act. 4 (citing Chang, Figs. 2, 3, 5); *see also* Chang 3:53–62. The Examiner finds that Chang discloses a first recess (i.e., locating groove 2131) in holder base 21 that receives the light emitter 242 and a second recess (i.e., locating groove 2131) in holder base 21 that receives the light sensor 242. *Id.* (citing Chang, Fig. 5); *see also* Ans. 4, 11 (relying on Chang's Figures 5 and 6).

To the extent the Examiner's Answer appears to alter the Examiner's reliance on Chang's locating grooves 2131 for disclosing the claimed recesses, by more generally stating that "Chang expressly teaches [that light emitter and receiver 241, 242] are situated in recesses that are located in the upper and lower walls of [bill passage] 20," we determine that such a general statement is too imprecise to inform Appellant as to whether the Examiner is relying on structures in Chang (i.e., holder unit 21) *other than* locating grooves 2131 for disclosing recesses. *See* Ans. 13 (citing Chang 3:53–4:30, Figs. 5, 6). As another example, the Examiner finds that

> Chang's figures and drawings are sufficient to convey what one of ordinary skill in the art would understand to be first and second recesses, i.e., a hole, aperture, recess, indentation or groove, located on two opposing walls of a housing, i.e., the two

> opposing walls of Chang's bill pathway, in which is placed a light emitter on one side and a light receiver on the other.

Id. at 14. Again, we determine it is unclear which structures the Examiner is relying on as presenting recesses in the two opposing walls of Chang's bill pathway.

The Examiner reasons that it would have been obvious to a skilled artisan

> to have provided the recesses in the housing to accommodate the light emitter and light receiver, as taught by Chang, in Saltsov's winding drum assembly, for the purpose of ensuring the entire sensor assembly is secured in a structurally sound assembly that also seals the light emitter and light receiver from dust and debris.

Final Act. 5. In support, the Examiner determines that "Chang's holes/recesses [(i.e., through holes 2430)] can be seen to entirely surround and support each of [light emitter and receiver 241, 242]." Ans. 18; *see also* Ans. 20 (citing Chang 2:45–55 (discussing the benefits of dust protection for sensing and privacy filter elements), 4:21–22). The Examiner also reasons that "Chang's disclosed recesses represent use of known structural mounting enhancement techniques to improve the similar light receiver/light emitter sensor pair in Saltsov's device in the same way." Ans. 18.

Appellant argues, *inter alia*, that the teachings of Saltsov and Chang "would [not] lead to mounting the light receiver and emitter in recesses in the *housing wall*," as claimed. Appeal Br. 16 (emphasis added). Rather, "the resulting modification would be to include a dust cover on the sensing arrangement 171." Appeal Br. 15. Appellant also submits that the Examiner failed to support the finding that "light emitters 241 and light sensors 242 are also in the locating groove 2131." Reply Br. 6; *see also id.* at 7(arguing that

"Chang does not disclose that the light sensors 242 or light emitters 241 are received in through hole 2430 or in the locating groove 2131" and also that "[whether] through hole 2430 and/or the locating groove 2131 may be centered on the beam path is not relevant to whether or not the light sensors 242 or light emitters 241 are received in recesses centered on the beam path").

Chang also discloses that

> holder base 21 of the bill-receiving unit 2 comprises two light transmissive portions 213 disposed at opposing top and bottom sides of the bill passage 20 corresponding to the recognition circuit assembly 24, a locating groove 2131 extending around each light transmissive portion 213, a privacy filter 3 mounted with a dust cover 214 in each locating groove 2131 over the respective light transmissive portion 213. . . . Further, each lens holder 243 comprises a through hole 2430 corresponding to one light sensor 242, and a lens set 2431 mounted in the through hole 2430.

Chang 4:1–14. Thus, a preponderance of the evidence fails to support the Examiner's finding that locating grooves 2131 and through holes 2430 are recesses that receive the light source or light emitter; rather, Chang discloses that locating groove 2131 receives a privacy filter 3 and dust cover 214 and through hole 2430 corresponds to a light sensor to function as a beam path.

Even if locating groove 2131 is considered to be a recess in a housing such as holding base 21, it does not "receive the light source" as recited in claim 1. Instead, privacy filter 3 and dust cover 214 are mounted in recess or locating groove 2131 as illustrated in Figure 6 of Chang. *Id.* at 4:1–14. In addition, light emitters 241 and light sensors 242 are installed in circuit boards 221 of control module 22 (*id.* at 3:53–63) rather than in holder base

21. Therefore, light emitters 241 and light sensors 242 are not "mounted directly on the housing enclosing the winding drum" as recited in claim 1.

Nor has the Examiner explained how these elements are mounted on a housing such as holding base 21, which the Examiner treats as Chang's housing. *See* Final Act. 4 (finding holding base 21 is the housing). Chang also discloses light emitters 241 and light sensors mounted *in* lens holders 243 (*id.* at 3:60–62, 4:1–15) rather than in either locating groove 2131 or a recess in holding base 21. Thus, we agree with Appellant that Chang does not teach light emitters and sensors in recesses in a housing such as holding base 21 (Appeal Br. 9–11), and we are not persuaded a skilled artisan would have been motivated to place Saltov's sensors in a recess of Saltov's housing as the Examiner proposes to do based on Chang's teachings (Final Act. 5) when Chang places privacy filter 3 and dust cover 214 in a housing recess and light sources and light receivers on circuit boards 221 and in holders 243 that are themselves attached to a base member 212 of holder base 21. *See* Chang, 3:27–67 (describing housing 1 as comprising holder base 21 with first and second base members 211, 212 that form a bill passage 20 with control module 22 and recognition circuit assembly 24 mounted in top and bottom sides of bill passage 20 with light emitters 241 and light sensors 242 installed in respective circuit boards 221 on either side of bill passage 20), Figs. 2, 5, 6.

Further, we are persuaded by Appellant's argument that a modification of Saltsov, in view of Chang, would not result in the claimed subject matter. Rather, one skilled in the art would be led to include a bill-receiving unit comprising a holder base within the housing of Saltsov, whereby the sensors are combined with privacy filters having dust covers.

Accordingly, we do not sustain the Examiner's rejection of claim 1, and claims 2–5, 9, and 11–13 depending therefrom.

Rejection II

The Examiner's findings relative to dependent claims 14 and 15 do not cure the deficiencies in the Examiner's rejection of claim 1 *supra*, from which claims 14 and 15 depend. Accordingly, for essentially the same reasons as set forth *supra*, we do not sustain the Examiner's rejection of claims 14 and 15.

CONCLUSION

In summary:

Claims Rejected	U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–5, 9, 11–13	103	Saltsov, Robinson, Chang		1–5, 9, 11–13
14, 15	103	Saltsov, Robinson, Chang, Ohara		14, 15
Overall Outcome				1–5, 9, 11–15

REVERSED