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EXAMINER

ANDEREGG, ZACHARY R

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KAZUHITO KOJIMA,
TOSHIHIRO HOTTA, TETSUYA TAZAWA,
HIROSHI OHMURA, YASUSHI OBA,
TAKUYA GOTO, and DEN OZAKI

Appeal 2015-002537
Application 12/854,454
Technology Center 3700

Before JOHN C. KERINS, JAMES P. CALVE, and
GEORGE R. HOSKINS, *Administrative Patent Judges*.

CALVE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from the final rejection of claims 1–4, 6, and 8. Appeal Br. 10. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

CLAIMED SUBJECT MATTER

Claim 1, the sole independent claim, is reproduced below.

1. An air conditioner that is a wall-hung air conditioner comprising:
a heat exchanger;
a fan; and
an electric equipment box in a main body of an indoor unit,

wherein said electric equipment box includes:
a container portion made of resin containing a control board, a terminal block and having an opening portion with a locking claw on an outer peripheral face;

a case made of sheet metal having an opening portion with a locking hole engaged with the locking claw of said container portion on an outer periphery thereof;

a cover made of resin having an opening portion with a locking claw on an outer peripheral face thereof; and

a lid body made of sheet metal having an opening portion with a locking hole engaged with the locking claw of said cover on an outer periphery thereof,

wherein the locking claw of said container portion is engaged with the locking hole of said case so that said case covers the outer peripheral face of the container portion, the locking claw of said cover is engaged with the locking hole of said lid body so that said lid body covers the outer peripheral face of said cover, an engaged portion of the locking claw of said container portion and the locking hole of said case is configured to be covered by said lid body by assembling an opening edge of the opening portion of said case covering said container portion to be covered by an opening edge of the opening portion of said cover covered by said lid body, and said cover and said lid body are fixed to said container portion and said case; and

between an opening end of said lid body and an opening end of said case, a flame spread inhibiting path of a predetermined length is formed in which the opening edge of said lid body and the opening edge of said case overlap.

REJECTION

Claims 1–4, 6, and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuoka (JP 10-132326, pub. May 22, 1998), Niki (UK 2,304,400 A, pub. Mar. 19, 1997), and Ito (US 5,702,021, iss. Dec. 30, 1997).

ANALYSIS

The Examiner found that Matsuoka teaches a heat exchanger 7, as claimed, with a resin container portion 71 covered by a sheet metal case 75 and resin cover 73 covered by a sheet metal lid body 77. Final Act. 3. The Examiner also found that lid 77 abuts case 75 and therefore an opening edge of the case covers the opening portion of the container, as claimed. Ans. 8.

The Examiner found that Niki teaches container 17 with locking claws (projections 33) on an outer peripheral face that engage locking holes 37 of case 16, and cover 52 with locking claw 54 that engages locking hole 51 on lid body 19. Final Act. 3–4. The Examiner determined it would have been obvious to include such features on Matsuoka to assemble the covers with the case and lid body more easily without parts like screws. *Id.* at 4.

The Examiner found that Ito teaches an electric equipment box with a flame spread inhibiting path of predetermined length between side walls 5a, 6a, as shown in Figure 2B. *Id.* at 4. The Examiner determined that it would have been obvious to include this overlap technique in Matsuoka as a simple way of connecting a lid body to a case without welding or other attachments to save manufacturing costs. *Id.* at 4–5. The Examiner also found that such a modification would result in an engaged portion of the locking claw and locking hole being covered by the lid body overlapping the side of the case where the locking hole engaged the locking claw. *Id.* at 5.

Appellants argue that Figure 2B of Ito does not correspond to the claimed electric equipment box because even though upper case 6 overlaps case 5, there is no disclosure of these elements being engaged with a case or cover, or a locking claw and locking hole of a container and case being covered by a lid body, as claimed. Appeal Br. 8; Reply Br. 6. Appellants also argue that providing a flame inhibiting path does not suggest using a lid body to cover an engaged portion of a locking claw of a container portion and a locking hole of the case. Appeal Br. 8; Reply Br. 6. We agree.

The Examiner has not established by a preponderance of evidence that Matsuoka, Niki, and Ito teach or suggest an electric equipment box including a locking claw of a container portion engaged to a locking hole of a case and this engaged portion covered by an opening edge of the cover that is covered by a lid body, as recited in claim 1. As the Examiner recognizes, Matsuoka teaches that the opening edge of case 75 and container 71 *abuts* an opening edge of lid body 77 and cover 73. Ans. 8. The Examiner proposes to extend these abutting elements of Matsuoka into an overlapping relationship based on teachings of Ito (Final Act. 4–5; Ans. 9); however, Appellants point out that Ito merely overlaps a single upper case 6 and lower case 5, rather than overlapping a lid body secured to a cover by locking holes and claws with a case secured to a container by locking holes and claws. Appeal Br. 6. The Examiner's determination that Ito supplies this feature to Matsuoka and Niki is not supported by a preponderance of evidence. *See* Final Act. 5; Ans. 9.

Ito teaches overlapping sidewalls 5a, 6a of lower and upper cases 5, 6, but these sidewalls are single elements that interlock with a single locking claw 5e and engageable portion 6i so that locking claw 5e cannot be easily disengaged from locking engageable portion 6i. Ito, 7:47–55, Figs. 2A, 2B.

Niki teaches engaging of projections 33 on support member 17 with engagement holes 37 on component box main body 16. Niki, 15:25–16:1. Once these features are used to secure case body 18 as a cover over the outer surface of support member 17 without screws or other attachment members, these projections 33 and engagement holes 37 are not overlapped by any other elements, covers, or members. *See id.* at 15:22–16:12, Figs. 1–4. Niki also teaches a plurality of engagement claws 36 that project from an upper edge of side portions 18b, 18c, but these claws do not overlap engagement claws 36 or engagement holes 37, nor are they overlapped by any features. *Id.* at 13:17–22, Fig. 4. Thus, the Examiner has not explained sufficiently why a skilled artisan would understand that modifying Matsuoka according to Ito would result in the engaged portions of the locking claws and holes of the container and case being covered by the lid body. Final Act. 5; Ans. 9.

The Examiner's determination appears to be based on the notion that the engaged locking claws and locking holes are near an opening or an edge of the housings and covers such that any overlap of the housing and covers will result in an overlap of these engagement features. Niki teaches holes 37 placed near an opening/open edge of component box 16, but projections 33 are placed away from an opening of support member 17, which is covered by main body 16. Niki, Fig. 1. Ito teaches engageable portion 6i along an edge of side wall 6a, but locking claw 5e is placed away from an opening or edge of side wall 5a. Ito, Fig. 2B. Therefore, it is not clear that modifying Matsuoka to include a flame spread inhibiting path as in Ito would result in or render obvious the claimed overlap in which the lid body covers engaged portions of locking claw and locking holes, as claimed.

Therefore, we do not sustain the rejection of claims 1–4, 6, and 8.

Appeal 2015-002537
Application 12/854,454

DECISION

We reverse the rejection of claims 1–4, 6, and 8.

REVERSED