

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GRANT E. RANDALL SR. and BRENT A. GILLILAND

Appeal 2008-1851
Application 10/631,193
Technology Center 3600

Decided: October 23, 2008

Before JENNIFER D. BAHR, LINDA E. HORNER, and ANTON W.
FETTING, *Administrative Patent Judges*.

BAHR, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Grant E. Randall Sr. and Brent A. Gilliland (Appellants) appeal under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1, 9, 13-18, 20, and 22. Claims 10 and 19, to which the Examiner objects as being dependent upon a rejected base claim, are not subject to any pending

rejection, and thus are not involved in this appeal. We have jurisdiction over this appeal under 35 U.S.C. § 6 (2002).

The Invention

Appellants' claimed invention is directed to "an insulated refrigeration panel assembly for an insulated cooling structure, such as a walk-in cooler, a refrigerated display cabinet, a beverage cooler and other insulated structure" (Specification 1, ¶ 1). Claim 1, reproduced below, is illustrative of the claimed invention.

1. An insulated refrigeration panel assembly comprising:

a first skin;

a second skin spaced generally parallel to said first skin;

a first insulating body sandwiched between said first skin and said second skin, said first skin, said second skin and said first insulating body forming a first panel unit:

a first flexible snap fit connector arranged to engage a first mating connector along a first direction, said first flexible snap fit connector attached to said first panel unit; and

a second flexible snap fit connector arranged to engage a second mating connector along a second direction transverse to said first direction, said second flexible snap fit connector attached to said first panel unit wherein said first flexible snap fit connector and said second flexible snap fit connector comprise at least one of said first skin, said second skin, and said first insulating body.

The Rejections

The Examiner relies upon the following as evidence of unpatentability:

Edgar	US 3,236,014	Feb. 22, 1966
Andersson	US 5,381,638	Jan. 17, 1995
DeWitt	US 5,418,028	May 23, 1995
Montes	US 6,122,879	Sep. 26, 2000

The following rejections under 35 U.S.C. § 103(a) are before us for review.

- (1) Claims 1 and 9 stand rejected as unpatentable over Montes in view of DeWitt.
- (2) Claims 1, 9, 13-16, and 18 stand rejected as unpatentable over DeWitt in view of Montes.
- (3) Claim 17 stands rejected as unpatentable over DeWitt in view of Montes and Andersson.
- (4) Claims 1, 9, and 20 stand rejected as unpatentable over Montes in view of Edgar.
- (5) Claim 22 stands rejected as unpatentable over Montes in view of Edgar and DeWitt.

THE ISSUE

The central issue involved in this appeal is whether it would have been obvious to combine the snap together connection technique of Montes with the transverse connector pair technique taught by both DeWitt and Edgar to facilitate connection of floor, wall, and ceiling panels together to form an insulated enclosure. All three references are directed to assembly of insulated panels to form an insulated enclosure. Appellants allege there is

no motivation for the combinations and that DeWitt and Edgar teach away from their combination with Montes. For the reasons set forth in our discussion below, we are not persuaded by Appellants' arguments. Accordingly, we affirm the Examiner's decision.

DISCUSSION

Rejection (1)

In contesting this rejection, Appellants argue claims 1 and 9 together. Therefore, in accordance with 37 C.F.R. § 41.37(c)(1)(vii) (2007), we select independent claim 1 as the representative claim to decide the appeal of this rejection, with claim 9 standing or falling with claim 1.

Appellants argue that Montes and DeWitt do not teach two flexible snap-fit connectors on a panel arranged to engage mating connectors along different directions, as required in claim 1 (Appeal Br.¹ 5). Appellants also argue that even if the combination of Montes and DeWitt taught these limitations, "there is no motivation to make the combination." *Id.* Specifically, Appellants reason that "while the prior art teaches two connections transverse to one another generally, there is nothing in the prior art that indicates both connections are snap-fit connections." *Id.*

To the extent that Appellants urge us to apply a rigid formula requiring a specific teaching, suggestion, or motivation in the cited prior art to make the combination, the United States Supreme Court has rejected such a rigid standard for obviousness. *KSR Int'l. Co. v. Teleflex Inc.*, 127 S. Ct.

¹ We refer herein to the Appeal Brief ("Appeal Br."), filed April 6, 2007, the Reply Brief ("Reply Br."), filed September 20, 2007, and the Examiner's Answer ("Answer"), mailed July 20, 2007.

1727, 1741 (2007) (While the requirement of demonstrating a teaching, suggestion, or motivation (the TSM test established by the Court of Customs and Patent Appeals) to combine known elements in order to show that the combination is obvious may be “a helpful insight,” it cannot be used as a rigid and mandatory formula.) While there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness, “the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *Id.*

We make the following findings with regard to the teachings of Montes and DeWitt:

- Montes teaches snap together insulated panels for walk-in freezers and cooler applications (col. 1, ll. 6-8).
- The snap-fit connection of each pair of connected panels 10, 12 includes a groove 16 on one panel having a pair of V-shaped, resilient engagement members 40 shaped into the groove and a tongue portion 18 on the second panel having a second pair of V-shaped, resilient engagement members 41 formed thereon (col. 3, ll. 52-64; col. 3, l. 66 to col. 4, l. 13; col. 4, ll. 47-50; fig. 1).
- The engagement members 40, 41 of Montes are formed from extensions of metal skins 20 of the panels (col. 3, ll. 55-58; col. 4, ll. 11-13).
- Montes teaches an interlocking and resilient connection (col. 4, ll. 47-50) that creates a biasing force between the engagement members that resiliently holds the panels to one another (col. 5, ll.

2-6) and further maintains a heat seal along seams 50 and 52 between panels 10, 12 (col. 5, ll. 9-11; fig. 4).

- DeWitt teaches insulated panels for walk-in coolers (col. 1, ll. 6-15).
- DeWitt teaches a first panel 10 provided with a first tongue 16 adapted for insertion into a groove 17 of a second panel 11 along a first direction (horizontal) and provided with a second tongue 18 adapted for insertion into a groove 19 of a ceiling panel 12 in a second direction (vertical) transverse to the first direction (col. 2, ll. 42-50; fig. 1).
- DeWitt's panels have tongue and groove connections that are interlocked and held together as by latches (col. 1, ll. 17-20; col. 2, ll. 37-39).
- DeWitt points out disadvantages, such as costly manufacture, weight, difficulty in assembly, and deterioration from oxidation, of metal casings (col. 1, ll. 28-31 and 40-43), and teaches an integral plastic cooler panel that eliminates the need for aluminum or other metal casings (col. 2, ll. 63-66).

As evidenced by the above findings, the applied prior art teaches both snap-fit connections and two connectors oriented on the panels to engage mating connectors in directions transverse to one another. Consequently, Appellants' argument that the prior art teaches two connections transverse to one another but fails to teach that both connections are snap-fit connections appears to be directed to DeWitt in isolation, rather than to the combination of Montes and DeWitt relied on by the Examiner. The argument thus fails to demonstrate error in the obviousness rejection, because nonobviousness cannot be established by attacking the references individually when the

rejection is predicated upon a combination of prior art disclosures. *See In re Merck & Co. Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

The Examiner contends that it would have been obvious to modify the panels of Montes by positioning connectors transversely to each other as taught by DeWitt “to increase the ways in which the panels can be attached to other panels to form a structure” (Answer 3). In so doing, the Examiner provides articulated reasoning with rational underpinning to support the conclusion of obviousness.

More specifically, as noted in our findings above, Montes teaches snap-fit connections that offer the benefit of an interlocking and resilient connection that creates a biasing force between the engagement members that resiliently holds the panels to one another and further maintains a heat seal along seams 50 and 52 between panels 10, 12. DeWitt teaches forming connectors on panels adapted for engagement with mating connectors along transverse directions so that panels can be connected at right angles to one another, so as to form a wall and ceiling, for example. “The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR*, 127 S. Ct at 1739. The insulated refrigeration panel assembly recited in claim 1 is nothing more than the combination of the snap-fit insulated panel connection of Montes with the transverse connection pair arrangement of DeWitt. Moreover, the snap-fit connector of Montes would function in precisely the same manner, with precisely the same result, namely, a secure and resilient connection forming a heat seal, when applied to a panel in a transverse connection pair, as taught by DeWitt. Accordingly, the combination proposed by the

Examiner is nothing more than the predictable combination of known prior art elements according to their established functions.

Appellants also argue that DeWitt teaches away from its combination with Montes because: (1) DeWitt stresses the importance of good interlock between connecting panels and teaches that the connection be latched, thereby effecting a tight connection that may not be afforded by the springy connection of Montes (Appeal Br. 5) and (2) DeWitt teaches away from the use of metal casings, the very casing used by Montes for its resilient snap-fit connection (Appeal Br. 6). We do not agree.

“[W]hen the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious.” *KSR*, 127 S. Ct. at 1740 (citing *United States v. Adams*, 383 U.S. 39, 51-52 (1966)). “A reference may be said to teach away when a person of ordinary skill, upon reading the reference would be led in a direction divergent from the path that was taken by the applicant.” *In re Haruna*, 249 F.3d 1327, 1335 (Fed. Cir. 2001). Simply that there are differences between two references is insufficient to establish that such references “teach away” from any combination thereof. *See In re Beattie*, 974 F.2d 1309, 1312-13 (Fed. Cir. 1992).

We note, at the outset, that in rejecting claim 1 as unpatentable over Montes in view of DeWitt, the Examiner does not propose modification of DeWitt to provide either the connections or metal skins taught by Montes. Rather, as discussed above, the Examiner proposes modification of Montes to provide pairs of transversely oriented connections as taught by DeWitt. Thus, to the extent that Appellants assert that DeWitt teaches against such

modifications, Appellants' assertions do not address the combination proposed by the Examiner.

Moreover, while DeWitt does teach panels having tongue and groove connections that are interlocked and held together as by latches, DeWitt does not specify any details of the referenced latching arrangement or suggest that it is superior to the resilient interlocking arrangement taught by Montes, much less discourage the use of the resilient interlocking snap together connection taught by Montes. Accordingly, we conclude that DeWitt does not teach away from combination of the transverse connection pair concept of DeWitt with the snap together connection concept taught by Montes.

We do not agree with Appellants that DeWitt teaches away from combination with Montes by teaching away from the use of metal casings. As noted in our findings above, DeWitt certainly points out disadvantages, such as costly manufacture, weight, difficulty in assembly,² and deterioration from oxidation, of metal casings, and teaches an integral plastic cooler panel that eliminates the need for aluminum or other metal casings. DeWitt in no way hints, however, that the transverse connector arrangement taught by DeWitt is unsuitable for use with the snap together panel structure of Montes, notwithstanding that the engagement members of the snap together connections of Montes are embodied as extensions of metal skins. Moreover, the artisan is not compelled to blindly follow the teaching of one prior art reference over the other without the exercise of independent judgment. *Lear Siegler, Inc. v. Aeroquip Corp.*, 733 F.2d 881, 889 (Fed.

² It is worthy of note that the assemblies criticized by DeWitt are panels having ends formed with tongue and groove connectors and provided with latch means for drawing and holding them snugly together (col. 1, ll. 17-20), not the snap together panels taught by Montes.

Cir. 1984). The Examiner points out that either plastic or metal could be used to form the snap-fit connectors of Montes (Answer 7), and Appellants do not dispute this contention. To the extent that DeWitt instructs the artisan to use plastic casing materials, and hence, plastic engagement member materials, as an improvement over metal casings, the artisan would have found it obvious to do so, as a matter of ordinary creativity and common sense. After all, “[a] person of ordinary skill is also a person of ordinary creativity, not an automaton.” *KSR*, 127 S. Ct. at 1742.

In light of the above, Appellants’ arguments do not demonstrate error in the Examiner’s conclusion that the subject matter of claim 1 would have been obvious. We sustain the rejection of claim 1 and claim 9, which stands or falls with claim 1, as unpatentable over Montes and DeWitt.

Rejection (2)

In contesting this rejection, Appellants argue in favor of claims 1, 9, 13-16, and 18 together as a group. Therefore, we select claim 1 as representative of the group, with the remaining claims standing or falling with claim 1.

The Examiner’s position in making this rejection is that it would have been obvious to modify the panels of DeWitt by using the flexible snap-fit connectors of Montes in place of the tongue and groove connectors taught by DeWitt, since these connectors are functionally equivalent and either would work equally well (Answer 4). The Examiner adds that the snap-fit connectors of Montes would provide a more secure attachment if used on the panels of DeWitt (Answer 5).

Appellants contend that the combination of references does not teach two snap-fit connectors receiving mating connectors in two different

directions (Appeal Br. 6). We do not agree with Appellants on this point for the reasons discussed above with regard to rejection (1). As discussed above, DeWitt teaches insulated panels provided with first and second tongue or groove connector elements arranged to engage mating connector elements along first and second directions, respectively, that are transverse to one another. Montes teaches insulated panels provided with resilient snap together connections. In other words, the applied prior art teaches both snap-fit connections and two connectors oriented on the panels to engage mating connectors in directions transverse to one another.

Appellants also argue there is no motivation or suggestion to replace the connectors described by DeWitt with the snap-fit connectors of Montes (Appeal Br. 6). This argument likewise is not persuasive. As discussed above, to the extent that Appellants urge us to apply a rigid formula requiring a specific teaching, suggestion, or motivation in the cited prior art to make the combination, the United States Supreme Court has rejected such a rigid standard for obviousness. *KSR*, 127 S. Ct. at 1741.

As pointed out above, “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.* at 1739. Our findings with respect to DeWitt and Montes are set forth above in our discussion of rejection (1). The insulated refrigeration panel assembly recited in claim 1 is nothing more than the combination of the snap-fit insulated panel connection of Montes with the transverse connection pair arrangement of DeWitt. Moreover, the snap-fit connector of Montes would function in precisely the same manner, with precisely the same result, namely, a secure and resilient connection forming a heat seal, when applied to a panel in a transverse connection pair,

as taught by DeWitt. Accordingly, the combination proposed by the Examiner is nothing more than the predictable combination of known prior art elements according to their established functions.

Appellants object that the Examiner provides no proof for the contentions that the snap-fit connector of Montes is functionally equivalent to the tongue and groove with latching connection of DeWitt and that the snap-fit connector of Montes would provide a more secure attachment than the tongue and groove with latching connection of DeWitt (Appeal Br. 6-7; Reply Br. 1-2). While one might debate over the relative benefits and pitfalls of the two securement techniques taught by DeWitt and Montes, the salient point is that DeWitt and Montes establish that they both are well known techniques for engaging and securing adjacent insulating panels of walk-in freezers or coolers. In that sense, they are recognized functional equivalents, in that they both perform the same function in a predictable manner to achieve essentially the same result, namely, a secure connection. “[W]hen a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *KSR*, 127 S. Ct. at 1740. As already noted, the combination at issue in claim 1 does not do so. Accordingly, we find no error in the Examiner’s proposed substitution of the snap-fit connector of Montes for the tongue and groove with latching connection of DeWitt.

Appellants additionally argue that using the metal resilient snap-fit connectors of Montes runs contrary to DeWitt’s object of eliminating the need for aluminum or other metal cases (Appeal Br. 7). This argument likewise does not convince us of error in the Examiner’s rejection. As noted

above, DeWitt certainly points out disadvantages of metal casings and teaches an integral plastic cooler panel that eliminates the need for aluminum or other metal casings. DeWitt in no way hints, however, that the transverse connector arrangement taught by DeWitt is unsuitable for use with the snap together panel structure of Montes, notwithstanding that the engagement members of the snap together connections of Montes are embodied as extensions of metal skins. Moreover, as also noted above, the Examiner points out that either plastic or metal could be used to form the snap-fit connectors of Montes (Answer 7), and Appellants do not dispute this contention. To the extent that DeWitt instructs the artisan to use plastic casing materials, and hence, plastic engagement member materials, as an improvement over metal casings, the artisan would have found it obvious to do so, as a matter of ordinary creativity and common sense.

For all of the above reasons, Appellants' arguments do not demonstrate error in the Examiner's rejection of claim 1 as unpatentable over DeWitt and Montes. We sustain the rejection as to claim 1 and claims 9, 13-16, and 18, which stand or fall with claim 1.

Rejection (3)

In contesting the rejection of claim 17 as unpatentable over DeWitt in view of Montes and Andersson, Appellants merely rely on their arguments directed to rejection (2) (Appeal Br. 7). For the same reasons discussed above with respect to rejection (2), those arguments likewise fail to demonstrate error in the rejection of claim 17. We sustain the rejection of claim 17.

Rejection (4)

In contesting the rejection of claims 1, 9, and 20 as unpatentable over Montes in view of Edgar, Appellants argue in favor of claims 1, 9, and 20 together as a group. Therefore, we select claim 1 as representative of the group, with claims 9 and 20 standing or falling with claim 1.

The Examiner's position in rejecting claim 1 as unpatentable over Montes and Edgar is that it would have been obvious to modify the panels of Montes by positioning connectors transversely to each other, as taught by Edgar, "to increase the ways in which the panels can be attached to other panels to form a structure" (Answer 5). Appellants argue that: (1) the Examiner's stated motivation for the modification is unsupported in the references (Appeal Br. 7-8); (2) Edgar is non-analogous art because it is not even remotely related to the construction of a refrigerator cooler (Appeal Br. 7); and (3) Edgar teaches away from its combination with a snap-fit connector, because the nails or screws employed by Edgar are consistent with a wood structure (Appeal Br. 8).

We make the following findings with respect to the teachings of Edgar:

- Although the Examiner points to Figure 2 of Edgar (Answer 5), an exemplary structure of one of Edgar's panels is probably best illustrated in Figure 13, which shows a panel A made up of rigid parallel spaced facings 21, 23 sandwiching insulation 22 (col. 3, ll. 8-10).
- Edgar's panel A comprises two male tongue members M oriented transversely relative to one another on the top and near ends of the panel, respectively, and two female groove members F oriented

transversely relative to one another on the rear and bottom ends of the panel (fig. 13).

- Edgar does not specifically mention use of the disclosed panels for refrigerated coolers, but does teach insulated panels and emphasize that full insulation is effected as the building is assembled (col. 1, ll. 30-31).
- According to Edgar, the disclosed panels enable buildings for a variety of uses to be erected in a fraction of the time required in the prior art (col. 1, ll. 20-22). Further, Edgar teaches assembling together panels to form the floor, walls, and roof of the building (col. 1, ll. 37-40; figs. 2, 3, and 13).
- Edgar shows bolts used at some of the connections (figs. 3 and 4).

We address first the argument that Edgar is non-analogous art. Two criteria have evolved for determining whether prior art is analogous: (1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved. *In re Clay*, 966 F.2d 656, 658-59 (Fed. Cir. 1992). One determines whether a prior art reference is within the same field of endeavor as the subject matter of a claim by comparing the structure and function of the subject matter recited in the claim to that of the subject matter disclosed in the reference. *In re Bigio*, 381 F.3d 1320, 1326 (Fed. Cir. 2004).

Appellants' claim 1 is directed to an insulated refrigeration panel assembly comprising first and second skins, an insulating body sandwiched between the first and second skins, and a pair of connectors arranged

transversely relative to one another. Claim 1 does not recite a refrigeration unit. Edgar likewise teaches an insulated panel assembly, wherein a panel A comprises first and second skins (facings 21, 23), a body of insulation 22 sandwiched between the first and second skins, and a pair of connectors M, M or F, F transversely oriented relative to one another. Moreover, both Appellants' panel assembly and Edgar's panel assembly are assembled to form an insulated enclosure with floor, walls, and roof or ceiling (Appellants' fig. 8; Edgar, col. 1, ll. 37-40; Edgar, figs. 2, 3, and 13). We thus find that the structure and function of the subject matter of claim 1 is the same as that of Edgar's panel assembly. Consequently, we conclude that Edgar is in the same field of endeavor as the subject matter of claim 1. Moreover, even if Edgar were not considered to be in the same field of endeavor as the subject matter of claim 1, Edgar is still reasonably pertinent to the problem with which Appellants were involved, namely, the assembly of insulated panels to form an insulated enclosure comprising a floor, walls, and a roof or ceiling. Edgar is thus analogous art to the subject matter of Appellants' claim 1.

We turn next to the issue of support for the Examiner's stated reason for combining Montes and Edgar. As noted above, obviousness determinations need not be supported by a specific teaching, suggestion, or motivation in the cited prior art to make the combination. While there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness, "the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR*, 127 S. Ct. at 1741. "[I]f a

technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *Id.* at 1740.

Montes teaches snap together insulated panels for walk-in freezers and coolers, which inherently require floors, walls, and ceilings or roofs. Montes focuses on the snap together connection, and does not specifically disclose how floor, wall, and ceiling or roof panels are to be engaged and connected together to form such an enclosure. Edgar illustrates how such connections between floor, wall, and roof panels may be made, namely, by providing the panels with connectors that are oriented transversely to one another. To arrange the snap together connectors of the panels of Montes in such a manner to permit connection of floor, wall, and ceiling panels to one another, as taught by Edgar, involves only ordinary creativity and routine skill. The combination proposed by the Examiner is nothing more than the predictable combination of known prior art elements according to their established functions.

We turn finally to the issue of whether Edgar’s teaching of nails and screws teaches away from the combination proposed by the Examiner. We conclude that it does not. As noted above, simply that there are differences between prior art references does not constitute a teaching away. Edgar does not teach the type of interlocking, resilient, snap together connection taught by Montes. Moreover, Edgar does show bolts used at some of the connections (figs. 3 and 4). Edgar, however, does not in any way discourage the artisan from using a resilient, interlocking snap together connection as taught by Montes.

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For the above reasons, Appellants' arguments do not demonstrate error in the rejection of claim 1 as unpatentable over Montes and Edgar. We sustain the rejection of claim 1 and claims 9 and 20, which stand or fall with claim 1.

Rejection (5)

In contesting the rejection of claim 22 as unpatentable over Montes in view of Edgar and DeWitt, Appellants simply rely on the arguments discussed above (Appeal Br. 8). For the reasons explained above, these arguments likewise fail to demonstrate error in the rejection of claim 22. The rejection is sustained.

DECISION

The decision of the Examiner to reject claims is 1, 9, 13-18, 20, and 22 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

JRG

CARLSON, GASKEY & OLDS, P.C.
400 WEST MAPLE ROAD
SUITE 350
BIRMINGHAM, MI 48009