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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* IAN TANSLEY

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Appeal 2019-004525  
Application 15/262,486  
Technology Center 3700

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Before MICHAEL J. FITZPATRICK, WILLIAM A. CAPP, and  
BEVERLY M. BUNTING *Administrative Patent Judges*.

BUNTING, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

STATEMENT OF THE CASE

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<sup>1</sup> In this Decision, we refer to the Specification filed September 12, 2016 (“Spec.”); Final Office Action dated April 24, 2018 (“Final Act.”); Appeal Brief filed December 20, 2018 (“Appeal Br.”); Examiner’s Answer dated March 21, 2019 (“Ans.”); and Appellant’s Reply Brief filed May 16, 2019 (“Reply Br.”).

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>2</sup> appeals from the Examiner's decision to reject claims 1, 3–22, and 24–27. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

#### CLAIMED SUBJECT MATTER

The claims are directed to a portable refrigeration apparatus for maintaining internal storage temperature without electrical power. Spec. Abstract. Of the claims on appeal, claims 1, 12, and 24 are independent. Appeal Br. Claim App. Claim 1, reproduced below with revised formatting, is illustrative of the subject matter on appeal:

1. A chilling panel comprising:
  - a casing layer that is thermally insulating and forms an exterior side of the chilling panel;
  - a coolant compartment defined by thermally conductive side walls abutting an interior side of the casing layer and configured to contain a cooling element;
  - an inner wall layer constructed of thermally conductive material and forms the interior side of the chilling panel;
  - a liquid reservoir compartment defined as the volume between the inner wall layer and a combination of the coolant compartment and the casing layer, and in fluid communication with the coolant compartment;
  - an internal thermal insulator affixed to the coolant compartment, the internal thermal insulator positioned and sized such that liquid contained in the liquid reservoir compartment is thermally insulated from the cooling element in the coolant compartment on a surface of the coolant compartment parallel with a major plane of the chilling panel; and

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<sup>2</sup> We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as The Sure Chill Company Limited. Appeal Br. 2.

means for removably interconnecting the chilling panel with a number of other chilling panels so that when interconnected, a combination of the chilling panel and the other chilling panels forms a sealed container.

#### REFERENCES

The Examiner relies on the following prior art references:

<b>Name</b>	<b>Reference</b>	<b>Date</b>
Schlosser ("Schlosser")	US 4,498,312	February 12, 1985
McGrath et al. ("McGrath")	US 5,875,599	March 2, 1999
Lantz ("Lantz")	US 2006/0174648 A1	August 10, 2006
Long et al. ("Long")	US 2010/0102057A1	April 29, 2010
Linder ("Linder")	US 8,215,125	July 10, 2012
Corder et al. ("Corder")	US 8,424,335 B2	April 23, 2013
Tansley ("Tansley")	WO 2013/110957 A2	August 1, 2013
Gray ("Gray")	US 2016/0243000 A1	August 25, 2016

#### REJECTIONS ON APPEAL<sup>3</sup>

The Examiner maintains the following rejections on appeal:

1. Claims 1 and 3 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Corder, Tansley, and McGrath. Final Act. 6–8.

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<sup>3</sup> The Examiner acknowledges that the rejection of claims 1, 3–11, and 27 under 35 U.S.C. § 112(b) as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention (Final Act. 4–5) was withdrawn in the Advisory Action dated November 6, 2018, and the amendment dated October 24, 2018 was entered in the record. Ans. 4.

2. Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Corder, Tansley, McGrath, and Long. *Id.* at 8.
3. Claims 5–7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Corder, Tansley, McGrath, and Gray. *Id.* at 9.
4. Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Corder, Tansley, McGrath, and Schlosser. *Id.* at 10.
5. Claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Corder, Tansley, McGrath, and Linder. *Id.*
6. Claims 11–14, 17, and 21–22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Corder, Tansley, McGrath, and Lantz. *Id.* at 11–13.
7. Claims 15 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Corder, Tansley, McGrath, Lantz, and Long. *Id.* at 13–14.
8. Claims 16 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Corder, Tansley, McGrath, Lantz, and Gray. *Id.* at 14–15.
9. Claim 20 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Corder, Tansley, McGrath, Lantz, and Linder. *Id.* at 15.
10. Claims 10, 24, and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Corder, Tansley, McGrath, Long and Schlosser. *Id.* at 15–18.
11. Claim 25 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Corder, Tansley, McGrath, Long, Schlosser and Gray. *Id.* at 18.
12. Claim 26 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Corder, Tansley, McGrath, Long, Schlosser and Linder. *Id.* at 18–19.

#### ANALYSIS

We have reviewed the Examiner’s rejections in light of Appellant’s arguments and determine that Appellant has identified reversible error in the Examiner’s rejections of claims 1, 3–11, and 27, but not as to claims 12–22

and 24–26. Accordingly, we reverse the Examiner’s rejections of claims 1, 3–11, and 27, and affirm the Examiner’s rejections of claims 12–22 and 24–26 based on the fact-finding and reasoning set forth below, and in the Final Action, Advisory Action, and Answer.

*OBVIOUSNESS BASED AT LEAST IN PART ON  
CORDER, TANSLEY, AND MCGRATH*

Appellant argues that independent claims 1, 12, and 24 are not obvious based at least on Corder, Tansley, and McGrath (Appeal Br. 4–9) and does not provide a separate argument for the dependent claims (*id.* at 8). As such, the dependent claims stand or fall with the corresponding independent claim. 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner finds that Corder teaches most of the elements of claim 1, and relies on Tansley and McGrath for the rest. Final Act. 6–8. For example, the Examiner finds that Corder discloses a chilling panel having (1) casing layer 320; (2) coolant compartment 310 “defined by thermally conductive sidewalls abutting an interior side” of casing layer 320 and containing cooling element 315; (3) inner wall layer (interior surface of inner wall layer 110); (4) liquid reservoir compartment 115 defined as the volume between inner wall layer 110 and the combination of coolant compartment 310 and casing layer 320, internal thermal insulator 120 “affixed to the coolant compartment 310;” and (5) that the chilling panels form a sealed container. Ans. 6–7. The Examiner acknowledges that Corder does not teach that the liquid reservoir compartment is in fluid communication with the coolant compartment and turns to the disclosure in Tansley regarding casing layer 10, coolant compartment 28, inner wall layer 16, and liquid reservoir 14 in fluid communication with coolant

compartment 28 and internal thermal insulator 22. *Id.* at 7. The Examiner reasons that

[i]t would have been obvious to one of ordinary skill in the art at the time of effective filing to have placed the liquid reservoir compartment and the coolant compartment of Corder in fluid communication with the arrangement taught by Tansley in order to promote circulation of liquid and the cooling of the payload.

*Id.* The Examiner relies on McGrath for its teaching regarding removable, interconnecting chilling panels that form a sealed container. *Id.* at 8. As to the proposed combination of Corder and McGrath, the Examiner reasons that it would have been obvious to add screws, locks or latches between adjacent chilling panels, “in order to ensure the container maintains its structure and contains its payload” and for ease of handling. *Id.* at 8.

As to claim 12, the Examiner finds that Corder teaches (1) a plurality of interconnected chilling panels 400 that define an inner volume 109 and contain fluid compartment 115 in communication with cooling element 315; and (2) internal thermal insulator 120 positioned and sized so that fluid compartment 115 is thermally insulated from cooling element 315 “on a surface of the cooling element parallel with a major plane of each respective chilling panel.” Final Act. 11. The Examiner turns to McGrath for its teaching regarding a means for removably interconnecting the chilling panels to form a sealed container, including screws, locks or latches. *Id.* at 11–12 (citing McGrath Figures 2, 3, 4A, 4B, 6, and 7). The Examiner repeats his reasoning from claim 1. *Id.* at 12.

For claim 24, the Examiner finds that Corder teaches (1) a number of interconnected chilling panels 400 with inner volume 109; (2) cooling elements 315 positioned within each chilling panel; (3) reservoirs 115

positioned on the interior side of internal volume 109 and “in thermal communication” with cooling element 315 and air within internal volume 109. Final Act. 16. Acknowledging that Corder does not teach that the fluid compartment is in fluid communication with the cooling element, the Examiner turns to the teaching in Tansley regarding a chilling panel having “casing layer (10), cooling element (28), inner wall layer (16), a liquid reservoir (14) in fluid communication with the cooling element (28), and an internal thermal insulator (22).” *Id.* The Examiner reasons that it would have been obvious to one of ordinary skill in the art “to have placed the liquid reservoir compartment and the coolant compartment of Corder in fluid communication with the arrangement taught by Tansley in order to promote circulation of liquid and the cooling of the payload.” *Id.* Again, the Examiner relies on McGrath for its teaching regarding a means for removably interconnecting the chilling panels to form a sealed container, including screws, locks or latches. *Id.* at 16–17 (citing McGrath Figures 2, 3, 4A, 4B, 6, and 7). The Examiner repeats his reasoning from claim 1. *Id.* at 17.

*Whether the layers of Corder are affixed to the coolant compartment.*

Claim 1 requires “an internal thermal insulator affixed to the coolant compartment.” Appeal Br. Claims App. Appellant contends that because Corder’s layers 330, 320, 315, 120, 115, and 110 are nested, they are not “attached (or affixed) to one another” and “layer 315 is not affixed to layer 120.”<sup>4</sup> Appeal Br. 5 (citing Corder 5:10–20). The Examiner responds

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<sup>4</sup> We note that heading V. A. of Appellant’s argument appears to be directed to claims 1 and 12, but Appellant’s express arguments only refer to claim 1. Appeal Br. 4–5. Because claim 12 does not recite the term affixed, our analysis is limited to Appellant’s arguments in connection with claim 1.

that thermal insulator 120 and the coolant compartment are affixed as a result of “friction of their contact.” Ans. 5–6. More persuasive is Appellant’s argument that “[c]ontact alone does not necessitate or imply attachment.” Reply 2. Indeed, a general purpose dictionary defines *affix* to mean “to attach physically,” and the Examiner does not explain sufficiently how Corder’s thermal insulator 120 and cooling compartment are physically attached. *See* Merriam-Webster.com (accessed December 19, 2019), <https://www.merriam-webster.com/dictionary/affix>.

Based on the foregoing, we are persuaded of error in the rejection of claim 1. Accordingly, we reverse the rejection of claim 1. For the same reasons, we reverse the rejections of claims 3–11 and 27, which ultimately depend from claim 1.

*The “reservoirs positioned on the interior of the sealed container and on each side of the internal volume and in fluid communication with the cooling element” limitation.*

As to claims 1, 12, and 24, Appellant argues that the cited references fail to disclose “reservoirs positioned on the interior of the sealed container and on each side of the internal volume and in fluid communication with the cooling element.” Appeal Br. 6. Specifically, Appellant maintains that the proposed combination fails to disclose “a cooling element as *distinct* from the liquid reservoir.” *Id.* (emphasis added). In Appellant’s view, the proposed modification would result in a hole in layer 120 of Corder, and that a hole in Corder’s layers “would not cause *thermal* communication between different elements.” *Id.* (emphasis added). In the Reply Brief, Appellant clarifies its position, stating that

[e]ach of 115 and 315 includes the same physical components and once joined together (via the teachings of Tansley), any delineation as to which portion was element 115 and 315

respectively would be an arbitrary and capricious choice. Because elements 115 and 315 of Corder are both ‘phase change material,’ once connected, it is impossible to identify where one begins and another ends.

Reply 2.

As the Examiner points out, this limitation is only recited in claim 24, and not claim 12.<sup>5</sup> Ans. 6. Appellant’s suggestion that the cooling element is *distinct* from the liquid reservoir is inapposite because neither claim 12 nor claim 24 explicitly requires this limitation. Additionally, neither claim 12 nor claim 24 requires thermal communication between different elements. The Examiner explains persuasively how Corder’s phase change material 115, 315 (1) may be ice or water; (2) if the region occupied by 315 is ice, as the ice melts, it changes phase to water; (3) if there is ice within 115, as the ice melts, it similarly changes phase to water that may also melt to a water phase; and Corder describes how “the panels may be in fluid communication thus 315 of the top, bottom, left, and right sides may communicat[e] with each other; similarly all of 115 may do the same.”

Ans. 6 (citing Corder 5:14–34).

As such, Appellant’s argument does not persuade us that the Examiner’s finding that the proposed combination discloses “reservoirs positioned on the interior of the sealed container and on each side of the internal volume and in fluid communication with the cooling element” is erroneous as to claims 12 and 24.

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<sup>5</sup> Because we are apprised of reversible error as to claim 1, we need not consider Appellant’s remaining arguments in connection with claim 1.

*That the proposed combination would be non-functional.*

Appellant further argues that the proposed combination is “non-functional” because “integrating a hole into element 120 of Corder would thwart the purpose elements of 115 and 315 of Corder.” Appeal Br. 6. Appellant supports this argument by pointing out that Corder teaches a thermally insulated and thermally controlled container formed by assembling differently sized sleeves of phase change material, i.e., 115, 215, and 315. Appeal Br. 6–7 (citing Corder 1:65–2:8). In Appellant’s view, by making a hole between the layers, phase change sleeves 115, 215, and 315 “could no longer adjust the container for multiple sizes” and a tiered phase change material could not be utilized “because each layer of the material would melt simultaneously as they are in thermal communication.” *Id.* at 7. Recognizing that claims 12 and 24 do not expressly require thermal communication, Appellant clarifies in its Reply Brief that enabling any type of fluid communication between the layers of Corder would “render[] the cited combination ineffective for the intended purpose of Corder to scale tiers up and down at will.” Reply 5, *see* Ans. 6 (“[T]he office notes that the claims require the coolant compartment and liquid reservoir to be in **fluid communication** thus appellant's incorrect assertion of no **thermal communication** is irrelevant.”).

Appellant’s arguments directed to the intended purpose of Corder’s elements 115 and 315 are unavailing. Corder contemplates that various sizes of sleeves 110, 210, 310 of phase change material 115, 215, 315 may be utilized. *See e.g.*, Corder Tables 1, 2, and 3. Likewise unpersuasive are Appellant’s arguments suggesting that the proposed modification would include a hole between layers. Appellant does not explain sufficiently why

one of skill in the art would necessarily make a hole between layers when combining Tansley's teachings regarding fluid communication with Corder's mobile refrigeration system. As the Examiner points out, he relies on the teachings of Tansley for fluid communication, and in particular, the teaching in Tansley regarding:

cooling element 28 (which may include ice; page 22 first paragraph or page 4 lines 8-10) and a fluid which may be water (page 17 lines 10-11). **Region 20b of Tansley corresponds to 115 of Corder; region 20a of Tansley corresponds to 315 of Corder; and insulation 22 of Tansley corresponds to insulation 120 of Corder.** Tansley provides for fluid communication between the cooling element and the liquid reservoir by way of opening 24.

Ans. 7. We agree with the Examiner that Appellant's argument are erroneously premised on the bodily incorporation of Tansley's fluid communication between the fluid compartment and cooling element into Corder's mobile refrigeration system. Ans. 8-9. This argument ignores the Examiner's proposed modification. Nor does Appellant explain why one of skill in the art, in implementing Tansley's fluid communication between the fluid compartment and cooling element into Corder's mobile refrigeration system, would be limited to providing a hole between layers. Appellant's assertions are contrary to *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), which states that "[a] person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR* at 421. *KSR* explains explicitly that the ordinary artisan recognizes "that familiar items may have obvious uses ***beyond their primary purposes***, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle." *KSR* at 420 (emphasis added). As such, Appellant's arguments do not persuade us that the proposed modification would change

the principle purpose of Corder or destroy its stated operating principle, namely “[a] modular collection of components from which a variety of thermally insulated and thermal controlled containers can be assembled.” Corder Abstract.

*That the proposed modification impermissibly relies on hindsight.*

Appellant contends that the Examiner’s modification of Corder using the teachings of McGrath impermissibly relies on hindsight. Appeal Br. 8–9. Specifically, Appellant argues that McGrath discloses insulation, and that “there is no teaching, suggestion, or motivation in McGrath that simple, removably-interconnected insulation panels could or should actively provide cooling.” *Id.* at 8. Additionally, Appellant argues that the provided motivation “to modify the teachings of Corder and Tansley into removably interconnected panels” is based on hindsight. *Id.* at 9. We are not persuaded by Appellant’s argument. It is well settled that “[a] suggestion, teaching, or motivation to combine the relevant prior art teachings does not have to be found explicitly in the prior art, as the teaching, motivation, or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references.” *In re Kahn*, 441 F.3d 977, 987 (Fed. Cir. 2006) (emphasis added).

Appellant does not dispute the Examiner’s reasoning, which comports with the Federal Circuit’s recognition of “[t]he normal desire of artisans to improve upon what is already generally known.” *In re Ethicon, Inc.*, 844 F.3d 1344, 1351 (Fed. Cir. 2017). We find that the Examiner provides a reasoned basis, supported by a preponderance of the evidence in the record, explaining why one of ordinary skill would utilized the teachings of Corder,

as modified by Tansley and McGrath, to arrive at the claimed invention of claims 12 and 24.

Based on the foregoing, we are not persuaded of error in the rejection of claims 12 and 24. For the same reasons, we affirm the rejection of claims 13–22, and 25–26, which fall with claims 12 and 24 respectively. Accordingly, we affirm the Examiner’s rejections of claims 12–22 and 24–26 as obvious based at least on Corder, Tansley, and McGrath.

### CONCLUSION

The Examiner’s rejections of claims 1, 3–11, and 27 are reversed. The Examiner’s rejections of claims 12–22, and 24–26 are affirmed.

### DECISION SUMMARY

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1, 3	103	Corder, Tansley, McGrath		1, 3
4	103	Corder, Tansley, McGrath, Long		4
5–7	103	Corder, Tansley, McGrath, Gray		5–7
8	103	Corder, Tansley, McGrath, Schlosser		8
9	103	Corder, Tansley, McGrath, Linder		9
11–14, 17, 21–22	103	Corder, Tansley, McGrath, Lantz	12–14, 17, 21–22	11
15, 19	103	Corder, Tansley, McGrath, Lantz, Long	15, 19	

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16, 18	103	Corder, Tansley, McGrath, Lantz, Gray	16, 18	
20	103	Corder, Tansley, McGrath, Lantz, Linder	20	
10, 24, 27	103	Corder, Tansley, McGrath, Long, Schlosser	24	10, 27
25	103	Corder, Tansley, McGrath, Long Schlosser, Gray	25	
26	103	Corder, Tansley, McGrath, Long Schlosser, Linder	26	
<b>Overall Outcome</b>			<b>12–22, 24–26</b>	<b>1, 3–11, 27</b>

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).

AFFIRMED-IN-PART