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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* RALPH ARMSTRONG, THOMAS E. NAHILL,  
KEITH J. BARKER, and BRIAN A. LYNCH

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Appeal 2017-003704  
Application 13/251,830  
Technology Center 3700

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Before JENNIFER D. BAHR, SEAN P. O'HANLON, and  
ANTHONY KNIGHT, *Administrative Patent Judges*.

BAHR, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Ralph Armstrong et al. (Appellants)<sup>1</sup> appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1–6, 8–10, 12–14, 16, 17, 26, and 29–36. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> The Appeal Brief identifies Graham Packaging Company L.P. as the real party in interest. Appeal Br. 2.

### THE CLAIMED SUBJECT MATTER

Claim 1, reproduced below, is illustrative of the claimed subject matter.

1. A plastic aerosol container assembly, comprising:
  - a plastic container having a main body portion defining an interior space and a finish portion defining an opening, the finish portion having an inner surface that has an undercut defined therein, wherein the undercut has a substantially horizontal orientation and the undercut transitions to a vertical section of the inner surface of the finish portion;
  - and
  - an aerosol valve assembly mounted to the plastic container, the aerosol valve assembly having a portion that engages the inner surface of the finish portion at least to the vertical section of the inner surface so as to be retained by the undercut.

### REJECTIONS

- I. Claims 1, 2, 5, 6, and 8 stand rejected under 35 U.S.C. § 102(b) as anticipated by Gaudron (US 2010/0288796 A1, pub. Nov. 18, 2010).
- II. Claims 1–3, 5, 6, and 8 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Gaudron and David (US 2012/0103330 A1, pub. May 3, 2012).
- III. Claims 1–6, 8–10, 12–14, 16, 17, 26, and 29–36 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Gaudron and Hirata (US 4,818,575, iss. Apr. 4, 1989).

## DISCUSSION

### *Rejection I—Anticipation by Gaudron*

The Examiner finds that Gaudron discloses a plastic aerosol container assembly satisfying all the limitations of claim 1, including, in pertinent part, a plastic container (canister 12) having a main body portion and a finish portion (at the top of canister 12 in Figure 2) having an inner surface that has an undercut defined therein (the curved portion immediately adjacent the open top). Ans. 2; Final Act. 2. In particular, the Examiner finds that Gaudron's canister 12 is cross-hatched with the cross-hatchings for plastic, as set forth in Manual of Patent Examining Procedure (MPEP) § 608.02 IX, thereby indicating that canister 12 is made of plastic. Ans. 2; Final Act. 2. Appellants contest both the Examiner's finding that Gaudron discloses canister 12 is made of plastic and the finding that the curved portion of canister 12 immediately adjacent the open top is an "undercut" as claimed. Appeal Br. 9–12.

Turning first to the finding that canister 12 is plastic, Appellants point out that valve stem adapter 38, which Gaudron expressly specifies is formed from a plastic material (Gaudron ¶ 13), is cross-hatched with forward-slash cross hatching, consistent with that shown in MPEP § 608.02 IX for plastic. Appeal Br. 10; Reply Br. 3. By contrast, Appellants continue, Gaudron's canister has backward-slash cross hatching, which is different from the forward-slash cross-hatching shown in the chart in MPEP § 608.02 IX for plastic, as well as different from the cross-hatching of plastic valve stem adapter 38. Appeal Br. 10; Reply Br. 3–4. Citing *In re Mihalich*, 980 F.2d 744, 25 USPQ2d 1478 (Fed. Cir. 1992), Appellants contend that "the direction in which cross-hatching lines extend without any indication or

suggestion otherwise is significant.” Appeal Br. 11. Further, Appellants urge that, while 37 C.F.R. § 1.84(h)(3) provides for cross-hatching of *juxtaposed* different elements to be angled in a different way, Gaudron’s outer canister 12 does not juxtapose plastic stem adapter 38, “and, thus, there is no need to reverse the cross-hatchings to indicate that the outer canister 12 is plastic.” *Id.* According to Appellants, “if Gaudron intended the outer canister 12 to be interpreted as the same material as plastic stem adapter 38, Gaudron should have disclosed as such and the cross-hatching of outer canister 12 should have been the same as the cross-hatching of plastic stem adapter 38, and not reversed.” *Id.*

For essentially the reasons set forth by the Examiner on page 13 of the Answer, Appellants fail to apprise us of error in the Examiner’s finding that Gaudron discloses canister 12 is plastic. Appellants’ reliance on *In re Mihalich* is misplaced. Gaudron does not present the types of inconsistencies between drawings, such as Figures 3 and 4 of the Kappos patent, and between the drawing and the specification of the Kappos patent highlighted by the court in *In re Mihalich*. See *In re Mihalich*, 25 USPQ2d at 1479. The difference between forward and rearward slanting lines in cross-hatching is not analogous to the difference between horizontal cross-hatchings and vertical cross-hatchings. Both the cross-hatching shown in the chart in MPEP § 608.02 IX and for plastic valve stem adapter 38 and the cross-hatching of canister 12 denote plastic material, despite the difference in the direction of angling. Appellants do not point to, nor are we aware of, any authority requiring that non-juxtaposed elements of like materials be cross-hatched in the same direction. In sum, the Examiner’s finding that

Gaudron discloses canister 12 is made of plastic is supported by a preponderance of the evidence.

With respect to the undercut limitation, Appellants assert “that an undercut is ‘a space formed by the removal or absence of material from the lower part of something . . . .’” Appeal Br. 11. Appellants contend that “Gaudron is entirely silent regarding the formation of the container, and therefore it is not ‘clear’ how the container of Gaudron is formed” and that Gaudron’s Figure 2 “merely shows an outwardly bowed section to define a concave section along an upper mouth of the container, which is in direct contrast with the undercut as disclosed and claimed.” *Id.* at 12.

In response, the Examiner points out that Appellants’ Specification does not disclose removing material to form the undercut; instead, “[t]he material is formed or shaped with the absence of material defining the undercut.” Ans. 13 (citing Spec. ¶¶ 12, 28–30). According to the Examiner, “[t]he absence of material forms a bow in the inner surface as shown at 22 in the application figures 4-6” and “[l]ikewise, the undercut in Gaudron is formed by an absence of material.” *Id.* The Examiner explains that “[a] bow is formed by the absence of material at the location of the inward curve,” thus meeting “the definition of an undercut that is provided by and contended by Appellant[s].” *Id.* at 13–14. The Examiner adds that “[a]t the point of the bow or inward curve there is an absence of material because it has been moved or curved or bowed to a different location thus forming the bow or undercut in the finish portion as claimed.” *Id.* at 14.

We have considered Appellants’ arguments on pages 11–12 of the Appeal Brief and pages 4–5 of the Reply Brief, but, for the reasons set forth by the Examiner, they do not apprise us of error in the Examiner’s finding

that the bowed inner surface of Gaudron's container (canister 12) defines an undercut as recited in claim 1.

For the above reasons, Appellants fail to apprise us of error in the rejection of claim 1 as anticipated by Gaudron. With respect to dependent claims 2, 5, 6, and 8, Appellants merely recite elements of these claims and baldly assert that "the art of record does not disclose or suggest a plastic aerosol container having each additional feature as claimed." Appeal Br. 16. These vague statements do not constitute separate arguments for patentability of the dependent claims pursuant to 37 C.F.R. § 41.37(c)(1)(iv). *See In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (holding that the Board had reasonably interpreted 37 C.F.R. § 41.37(c)(1)(vii) (the predecessor to § 41.37(c)(1)(iv)) as requiring "more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art"). Appellants have waived any argument for separate patentability of these dependent claims. *See id.* Accordingly, we sustain the rejection of claims 1, 2, 5, 6, and 8 as anticipated by Gaudron.

*Rejection II—Obviousness based on Gaudron and David*

In rejecting claims 1–3, 5, 6, and 8 as unpatentable over Gaudron and David, the Examiner finds that David teaches "that it is well known in the art to manufacture aerosol containers from a variety of materials include polyethylene terephthalate" (hereinafter "PET"). Ans. 4 (citing David ¶ 168). The Examiner determines it would have been obvious to make Gaudron's aerosol container and finish portion from PET as taught by David because David evidences PET and other materials are art-recognized equivalents for use in manufacturing aerosol containers, thus making PET

obvious to try in Gaudron's container with a high probability of success. *Id.*; Final Act. 3.

Appellants contend that a person having ordinary skill in the art would not have been motivated to combine the plastic, outside-mounted aerosol containers of David with the inside-mounted aerosol container of Gaudron because this would render Gaudron's container inoperable for its intended purpose and one would expect to have to change the way the valve assembly is mounted to Gaudron's container. Appeal Br. 14. Appellants also emphasize that Appellants' Specification notes the inherent mechanical advantages of inside seals over outside seals, but further discloses that those in the field have considered inside seals to be impractical for plastic aerosol containers because of difficulty in mounting a valve assembly to the inner surface of the finish portion of a blow molded plastic container. *Id.*; see Spec. ¶ 6 (noting that valve assemblies typically have been attached to the outer surface of the finish portion of plastic aerosol containers, but it is considered preferable to mount valve assemblies to an inside surface of the upper portion of metal aerosol containers).

Appellants' arguments are not persuasive. Although it may have been common for valve assemblies to be mounted on the outside of blow molded plastic aerosol containers, according to Appellants' Specification (¶ 6), Gaudron discloses a valve assembly mounted to the inner surface of a plastic aerosol container, thereby evidencing that it was known to do so. Further, Appellants' Specification states that the difficulty in mounting a valve assembly to the inner surface of the finish portion of a blow molded plastic container stems from the fact that "[t]he inner surface of the finish portion in such a container tends to be smooth, with no features that would enable a



valve assembly to gain the necessary purchase in order to prevent dislodgement.” Spec. ¶ 6. However, Gaudron provides a feature (i.e., the bowed upper portion of canister 12) enabling the valve assembly to gain the necessary purchase to prevent dislodgement, thereby circumventing the mounting difficulty with interior mounting alluded to in Appellants’ Specification. Gaudron, Fig. 2.

Appellants additionally reiterate the arguments presented against the anticipation rejection of claim 1, which, for the reasons discussed above, do not apprise us of error. Appeal Br. 15. Thus, these arguments, likewise, do not apprise us of error in the rejection of claim 1 as unpatentable over Gaudron and David. With respect to dependent claims 2, 3, 5, 6, and 8, Appellants merely recite elements of these claims and baldly assert that “the art of record does not disclose or suggest a plastic aerosol container having each additional feature as claimed.” Appeal Br. 16. As noted above, such vague statements do not constitute separate arguments for patentability of the dependent claims pursuant to 37 C.F.R. § 41.37(c)(1)(iv). *See In re Lovin*, 652 F.3d at 1357.

Accordingly, we sustain the rejection of claims 1–3, 5, 6, and 8 as unpatentable over Gaudron and David.

*Rejection III—Obviousness based on Gaudron and Hirata*

In rejecting claims 1–6, 8–10, 12–14, 16, 17, 26, and 29–36, the Examiner finds that Hirata teaches a container for containing aerosol comprising PET having a crystallized finish for improving resistance to falling shock. Ans. 7 (citing Hirata 4:56–62; 11:27–34; 1:29; 9:42–10:2); Final Act. 4. The Examiner determines it would have been obvious to

provide Gaudron's container with a crystallized finish of PET as taught by Hirata, "to improve resistance to falling shock." Ans. 7; Final Act. 4-5.

With respect to independent claims 1, 9, 14, and 30, Appellants' arguments contesting this rejection are substantially the same as those presented against the combination of Gaudron and Davis. Appeal Br. 14-16. For the reasons discussed above, these arguments do not apprise us of error.

With respect to dependent claims 2-6, 8, 10, 12, 13, 16, 17, 26, 29, and 31-36, Appellants merely recite elements of these claims and baldly assert that "the art of record does not disclose or suggest a plastic aerosol container having each additional feature as claimed." Appeal Br. 16-18. As noted above, such vague statements do not constitute separate arguments for patentability of the dependent claims pursuant to 37 C.F.R. § 41.37(c)(1)(iv). *See In re Lovin*, 652 F.3d at 1357.

Accordingly, we sustain the rejection of claims 1-6, 8-10, 12-14, 16, 17, 26, and 29-36 as unpatentable over Gaudron and Hirata.

#### DECISION

The Examiner's decision rejecting claims 1-6, 8-10, 12-14, 16, 17, 26, and 29-36 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).

AFFIRMED