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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* ROBERT A. AKIN, JR.

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Appeal 2020-002074  
Application 15/793,196  
Technology Center 3700

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Before EDWARD A. BROWN, BRETT C. MARTIN, and  
CARL M. DeFRANCO, *Administrative Patent Judges*.

BROWN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant<sup>1</sup> seeks review under 35 U.S.C. § 134(a) of the Examiner's decision rejecting claims 1–16. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

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<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party as Robert A. Akin, Jr. Appeal Br. 1.

### CLAIMED SUBJECT MATTER

Claims 1 and 10 are independent claims. Claim 1 illustrates the claimed subject matter.

1. A humidor with improved moisture control, comprising:
  - a box having a flat base with plural lower sides extending upwardly therefrom;
  - a cover having a top with plural upper sides extending downwardly therefrom;
  - a box liner comprising plural lower panels correspondingly disposed adjacent said plural lower sides, each of said plural lower panels having an upper edge;
  - a cover liner comprising plural upper panels correspondingly disposed adjacent said plural upper sides, each of said plural upper panels having a lower edge, and wherein said plural upper edges and said plural lower edges have a curvilinear cross section profile, generally following an “S” shape, which defines a convex cylindrical portion joined with a concave cylindrical portion along each of said plural lower edges and each of said plural upper edges, and wherein said lower edges profiles and said upper edges profiles are aligned to cooperatively and correspondingly engage said concave cylindrical portions with said convex cylindrical portions between said upper edges and said lower edges while said cover is disposed on said box, to thereby form a circuitous path between said upper edges and said lower edges against the movement of air and moisture.

Appeal Br. 23 (Claims App.).

### REJECTIONS

Claims 1–4, 6, 9–12, and 16 are rejected under 35 U.S.C. § 103 as unpatentable over Barrerio (US 5,970,987, issued Oct. 26, 1999) and Beattie (US 6,752,092 B2, June 22, 2004).

Claims 5 and 13 are rejected under 35 U.S.C. § 103 as unpatentable over Barreiro, Beattie, and Green (US 7,287,306 B1, issued Oct. 30, 2007).

Claims 7, 8, 14, and 15 are rejected under 35 U.S.C. § 103 as unpatentable over Barreiro, Beattie, and Krawec (US 6,116,029, Sept. 12, 2000).

## ANALYSIS

*Obviousness over Barrerio and Beattie (Claims 1–4, 6, 9–12, and 16)*

### Claims 1–4, 6, and 9

Claim 1 recites, in pertinent part, “a box liner comprising plural lower panels . . . each of said plural lower panels having *an upper edge*,” “a cover liner comprising plural upper panels . . . each of said plural upper panels having *a lower edge*,” and “said plural upper edges and said plural lower edges have *a curvilinear cross section profile, generally following an ‘S’ shape, which defines a convex cylindrical portion joined with a concave cylindrical portion along each of said plural lower edges and each of said plural upper edges.*” Appeal Br. 23 (Claims App.) (emphases added).

Claim 1 further requires that:

said lower edges profiles and said upper edges profiles are aligned *to cooperatively and correspondingly engage said concave cylindrical portions with said convex cylindrical portions between said upper edges and said lower edges while said cover is disposed on said box*, to thereby form a circuitous path between said upper edges and said lower edges against the movement of air and moisture.

*Id.* (emphasis added).

Appellant’s Figure 5 shows a humidor comprising a box liner including lower panels 7 each having an upper edge 11, and a cover liner

including upper panels 9 each having a lower edge 13. *See* Fig. 5, Spec.

¶ 48. Figure 6 shows an edge 30 having a curvilinear cross-sectional profile of a generally “S” shape, with a convex cylindrical portion 32 and a concave cylindrical portion 34. *See* Fig. 6, Spec. ¶ 50. Figure 7 shows liners including an upper panel 43 engaging a lower panel 41 along cooperative curvilinear edges 47 and 45, where the curvilinear edges are mated such that the concave and convex cylindrical portions engage one another, thereby providing a circuitous path. *See* Fig. 7, Spec. ¶ 51.

The Examiner finds that Barreiro discloses a humidor comprising a box including lower sides (side walls 18) and a cover (lid 22) including upper sides. Final Act. 3. The Examiner relies on Beattie as teaching a box liner and a cover liner (inner shell 46). *Id.*; *see also* Ans. 21 (“[T]here is no assertion that Barreiro discloses a liner. Beattie . . . is used to modify Barreiro—in part—to add the use of a liner.”). The Examiner finds that Beattie’s box liner and cover liner comprise respective upper edges and lower edges that include each of the recited limitations of the upper and lower edges. Final Act. 3; *see also id.* at 6 (annotated Beattie Figure 3).

Appellant contends, *inter alia*, that Beattie does not teach a box liner and a cover liner comprising upper and lower edges, each having a curvilinear cross section profile, generally following an “S” shape, which defines convex and concave cylindrical portions, as required by claim 1. Ans. 19–21. Beattie discloses a labyrinthine gasket seal between bottom element 10 and top element 12. Beattie, col. 3, ll. 58–59. As to the gasket seal, Appellant notes that inner shell 46 of top element 12 has an inner ridge 52 surrounded by an intermediate groove 54, in turn surrounded by an outer ridge 56. Appeal Br. 20 (citing Beattie, Figs. 2–5). Appellant further notes

that outer shell 34 of bottom element 10 has a ridge 58 surmounted by a rounded rib 60, both surrounding well 42 and defining an upper edge 61. *Id.* (citing Beattie, Figs. 1, 3, 4). Outer shell 34 includes an outer contact surface 65 that opposes outer ridge 56 of inner shell 46 when container 14 is closed, as shown in Figure 4. *Id.* In inner shell 46, a gasket 62 including a contact surface 67 is press-fit into groove 54 for mating against rib 60 to form a fire- and water-resistant seal when container 14 is closed, as shown in Figure 4. *Id.* Appellant contends that Figure 6 of Beattie shows that ridge 58 is not curvilinear in shape and does not follow an “S” shape, as claimed. *Id.* Appellant further contends that, as shown in Figure 5 of Beattie, intermediate groove 54 and outer ridge 56 do not satisfy the claim limitations that the lower edges profiles and the upper edges profiles are aligned to cooperatively and correspondingly engage the concave cylindrical portions with the convex cylindrical portions between the upper edges and lower edges while the cover is disposed on the box, because intermediate groove 54 and outer ridge 56 do not possess the requisite shape. *Id.*

Appellant’s contentions are persuasive. As shown in Figures 5 and 6 of Beattie, both outer contact surface 65 of bottom element 10 and outer ridge 56 of top element 12, which oppose each other when container 14 is closed (Fig. 4), are linear surfaces, not curved surfaces. Further, contact surface 67 of top element 12 appears to also be flat. As described in Beattie, contact surface 65, outer ridge 56, contact surface 67, and rib 60 form the seal when the cover is closed. We agree with Appellant that neither outer ridge 56 and contact surface 67 provided on top element 12 nor contact surface 65 and rib 50 provided on bottom element 10 generally follows an

“S” shape, much less also defining convex and concave cylindrical portions that “cooperatively and correspondingly engage,” as required by claim 1.

Annotated Beattie Figure 3 includes the annotations “curvilinear cross section ‘s’ shape” and two associated arrows. Final Act. 3. The lower arrow points to the portion of bottom element 10 in the vicinity of rib 60 and outer ridge 65 as having a curvilinear “S” shape. *Id.* As discussed above, however, we disagree that Figure 3 or Figure 6 shows this region of bottom element 10 having “a curvilinear cross section profile, generally following an ‘S’ shape, which defines a convex cylindrical portion joined with a concave cylindrical portion,” as claimed.

As also shown in Annotated Beattie Figure 3, the upper arrow points to the surface identified by reference number 46 in Figure 5 of Beattie. *See* Final Act. 3; Beattie, Fig. 5. It is Appellant’s position that this surface is not even part of the edge, but rather, is a cross sectional view of the blow-molded interior of the top element 12. Appeal Br. 20–21. But even if this drawing line of top element 10 represents a surface having a general “S” shape, as the Examiner submits, this surface does not “cooperatively and correspondingly engage” the region of bottom element 10 that the Examiner has annotated “curvilinear cross section ‘s’ shape,” which can be seen by comparing Figure 3 with Figures 4–6 of Beattie. As such, the claim limitation that the lower and upper edge profiles engage the concave cylindrical portions with the convex cylindrical portions while the cover is disposed on the box would not be satisfied by the “curvilinear cross section ‘s’ shape[s]” identified by the Examiner.

Thus, we do not sustain the rejection of claim 1, or dependent claims 2–4, 6, and 9.

Claims 10–12, and 16

Claim 10 is directed to a box comprising, *inter alia*, an upper portion terminated by a lower edge that engages a lower portion terminated by an upper edge, wherein the upper and lower edges have “a curvilinear cross section, generally following an ‘S’ shape,” with limitations similar to those recited in claim 1. We do not sustain the rejection of claim 10, or dependent claims 11, 12, and 16, for reasons similar to those discussed for claim 1.

*Obviousness over Barreiro, Beattie, and Green (Claims 5 and 13)*

*Obviousness over Barreiro, Beattie, and Krawec (Claims 7, 8, 14, and 15)*

The Examiner does not rely on Green or Krawec to cure the deficiency in the rejection of claim 1 or 10. Final Act. 17–20. Thus, we do not sustain the rejections of claims 5, 7, 8, and 13–15 for the same reasons as for claims 1 and 10.

CONCLUSION

In summary:

<b>Claim(s) Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1–4, 6, 9–12, and 16	103	Barreiro, Beattie		1–4, 6, 9– 12, and 16
5, 13	103	Barreiro, Beattie, Green		5, 13
7, 8, 14, 15	103	Barreiro, Beattie, Krawec		7, 8, 14, 15
<b>Overall Outcome</b>				1–16

REVERSED