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ROBERT M. SCHWARTZ, P.A. P.O. BOX 221470 HOLLYWOOD, FL 33022			MORAN, KATHERINE M	
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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* ALFRED K. DASSLER, ROBERT M. SCHWARTZ,  
and ALBERT J. HOFELDT

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Appeal 2017-002129  
Application 13/250,860  
Technology Center 3700

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Before MICHAEL L. HOELTER, JILL D. HILL, and  
BRENT M. DOUGAL, *Administrative Patent Judges*.

DOUGAL, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from a final rejection of claims 1, 2, and 4–9. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

### CLAIMED SUBJECT MATTER

The claims are directed to a support element for “protective pads and padding and the like” used in “articles which contact body parts,” e.g., cycling gloves. Spec. 1, 1. 29–2, 1. 2. Claims 1, 4, 6, 8, and 9 are independent. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A support element comprising:

a padding structure constructed of a plurality of interconnected spherical shaped structures together defining a pliable support element;

said spherical shaped structures being formed of a material and being interconnected to one another with a connection defining flexible interconnectors for enabling said padding structure to be flexibly bent, said connection being a living hinge formed with said material of said spherical shaped structures; and

a walled containment, said padding structure being disposed within said walled containment.

### EVIDENCE

The Examiner relies on the following evidence in the rejections on appeal:

Grick	US 4,432,099	Feb. 21, 1984
Copeland	US 2006/0070171 A1	Apr. 6, 2006
Simic	US 7,234,170 B2	June 26, 2007
Patterson	US 7,346,935 B1	Mar. 25, 2008
Baker	US 2008/0083050 A1	Apr. 10, 2008

### REJECTIONS

Claims 1, 2, 5, and 8 are rejected under 35 U.S.C. § 102(b) as being anticipated by, separately, Grick and Simic.

Claims 4, 6, 7, and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over:

Grick, Simic, and Copeland (claim 4);  
Simic and Baker (claim 6);  
Simic and Patterson (claim 7); and  
Grick and Copeland (claim 9).

## OPINION

### *Living Hinge*

Appellants argue that independent claims 1 and 8 are not anticipated by Grick because it does not teach a “living hinge” as required by the claims. Appeal Br. 10. The Examiner finds that Grick’s “exposed surfaces of layer 84” between the “ball shaped structures 86” are “living hinge[s] formed with said material of said spherical shaped structures” as required by the claims. Final Act. 3; *see also* Grick Figs. 2, 3. However, Appellants argue that this structure cannot be a living hinge because of the way that it is manufactured. In particular, because the ball shaped structures or protuberances are vacuum formed from a single piece of material, “the sheet would be stretched at the hollow protuberances (86) because material is displaced at the protuberances during forming thereof” and “the protuberances (86) would in fact be **THINNER** than the alleged region.” Appeal Br. 12.

Appellants further argue that:

if any of [Grick’s] structure were considered as a living hinge (which appellants do not believe that it is due to the minor difference in thickness due to forming from a uniform sheet and a lack of “rigid” bodies), it would be that the hollow protuberances (86) are in fact living hinges between the alleged region “84”.

*Id.*

The Examiner responds that “the claims [do not] recite the living hinge as having a structural feature of being thinner than that of the protuberances/spherical shaped structures.” Ans. 2. The Examiner continues, the “references teach the spherical elements as being formed of the same material as that of the living hinge and this material is considered capable of allowing for the padding structure to be bent.” *Id.* at 3.

Appellants argue that the Examiner’s claim construction is inconsistent with the ordinary meaning of the term “living hinge” as evidenced by Wikipedia and Appellants’ Specification. Reply Br. 3. Appellants cite Wikipedia as defining a living hinge as “a thin flexible hinge (flexure bearing) made from the same material as the two rigid pieces it connects, rather than cloth, leather, or some other flexible substance. It is typically **thinned** or cut to allow the rigid pieces to bend along the line of the hinge.” *Id.* Appellants’ Specification states that a living hinge is “a hinge which results from a thinned portion of the material of the plate elements 3 as a result of injection molding.” Spec. 15, ll. 20–22. Appellants argue that therefore, the claimed living hinge does “require a thinned region or possibly cuts to result in a living hinge.” Reply Br. 3.

The United States Patent and Trademark Office gives claims their broadest reasonable interpretation consistent with the Specification, reading claim language in light of the Specification as it would be interpreted by one of ordinary skill in the art. *See In re Am. Acad. of Sci. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004).

We agree with Appellants that the Examiner’s claim construction of “living hinge” “as being formed of the same material as” of the spherical elements and the material being “capable of allowing for the padding

structure to be bent” is overly broad. We determine that a “living hinge” requires more than mere flexibility of the material generally. Instead, and consistent with Appellants’ usage, we construe “living hinge” to mean a flexible hinge made from the same material as two adjacent pieces it connects, where the hinge has less material (i.e., is “thinned” or cut) than the two adjacent pieces to allow the adjacent pieces to bend along the line of the hinge.

As the Examiner has not shown that Grick teaches a living hinge, we do not sustain the anticipation rejection over Grick of claims 1, 2, 5, and 8. We also do not sustain the obviousness rejection of claim 9, which also relies on this same unsupported finding.

#### *Walled Containment*

Appellants argue that independent claims 1 and 8 are not anticipated by Simic because Simic does not teach a “padding structure being disposed within said walled containment” as required by the claims. The Examiner finds that “Simic teaches a [mitten] comprising a padding structure constructed of a plurality of interconnected spherical and ball shaped structures 25.” Final Act. 4. The Examiner further finds “that the [mitten] is molded as a one-piece unit and therefore is formed of the same material throughout.” *Id.* At the same time, the Examiner also finds that “[t]he padding structure is disposed within the walled containment formed by mitten sides 3,5.” *Id.* at 5. The Examiner further explains that it is the “exterior surfaces” of the sides that “form the walled containment.” Ans. 4.

Appellants argue that the sides of the mitten are also the padding structure and so “the sides are not and cannot be disposed within

themselves.” Appeal Br. 14–15. We agree. As noted above, the Examiner found “that the [mitten] is . . . a one-piece unit . . . formed of the same material throughout.” Final Act. 4. Part of that structure, i.e. part of the wall, is formed as a ball-shaped structure. It is unclear how part of the walled containment can also be “disposed within said walled containment” as required by claims 1 and 8.<sup>1</sup>

Thus, we do not sustain the anticipation rejection over Simic of claims 1, 2, 5, and 8. We also do not sustain the obviousness rejections of claims 6 and 7 which rely on this same unsupported finding.

*Shore Hardness of 20–95 Shore A*

Independent claim 4 is similar to claim 1 in some respects, but also includes “said padding structure having vent openings formed therein” and “said spherical shaped structures being formed of a material having a shore hardness of 20–95 Shore A.” The Examiner finds that Grick teaches a support element with padding structure, but does not teach either of the above highlighted limitations. Final Act. 5. The Examiner finds that Copeland teaches the vent openings (*id.*), which Appellants do not contest (*see generally*, Appeal Br. 16–19).

The Examiner finds that “Simic teaches a padding structure with the spherical shaped structures being formed of a material having a shore hardness within the range of 20–95 Shore A.” Final Act. 5. The Examiner determines that “it would have been obvious to . . . modify Grick to form the

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<sup>1</sup> Reading the walled containment and the padding structure as separate components is also consistent with the Specification. *See e.g.*, Spec. 23, ll. 8–11, 15–19; Figs. 15, 17.

spherical structures of a material having a shore hardness of 20-95 Shore A in that this value is known to result in structures having desired flexibility and elongation properties.” *Id.*

Appellants argue that using Simic’s material in Grick’s helmet would render the helmet unsatisfactory for its intended purpose. Appeal Br. 17–18. Appellants assert that Grick’s internal helmet layers must “retain their plastic deformation” “so that during use, the open pockets (86) of the layers deform to absorb energy of a crash.” *Id.* at 17. Appellants argue that “[p]roviding the hollow protuberances (86) in a material having a hardness of 20–95 Shore A would not allow such required deformation as the layer would in no way be considered as rigid.” *Id.* at 17. Appellants further argue that “modification of Grick as alleged by the examiner to include the material of Simic would in fact destroy the ability of the protuberances (86) to deform in the required manner during an impact.” *Id.* at 18.

However, Appellants have not provided any evidence in support of this allegation, and it is not otherwise self-evident from the record that a “layer [with a hardness of 20–95 Shore A] would in no way be considered as rigid” or that the modification would “destroy the ability of the protuberances (86) to deform in the required manner during an impact.” *Id.* at 17–18. Thus, Appellants’ statement is merely attorney argument, with no supporting evidence which does not inform us of error in the Examiner’s rejection of claim 4. *See In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974) (“Attorney’s argument in a brief cannot take the place of evidence.”).

In the Reply Brief, Appellants argue for the first time that the Examiner’s reason to combine is unsupported. Reply Br. 8–10. As noted above, in the Final Action the Examiner determined that “it would have been



obvious to . . . modify Grick to form the spherical structures of a material having a shore hardness of 20-95 Shore A in that this value is known to result in structures having desired flexibility and elongation properties.” Final Act. 5.

Though Appellants only cite to the Examiner’s Answer in their arguments (Reply Br. 8–10), this determination was made in the Final Action (Final Act. 5). Appellants do not offer any explanation why this argument could not have been presented in the Appeal Brief. Therefore, we will not consider this new and untimely argument. *See* 37 C.F.R. §§ 41.37(c)(1)(iv), 41.41(b)(2); *Ex parte Borden*, 93 USPQ2d 1473, 1477 (BPAI 2010) (informative).

#### DECISION

The Examiner’s rejections of claims 1, 2, and 5–9 are reversed.

The Examiner’s rejection of claim 4 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-IN-PART