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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ANDREW HARLAN WEISBERG

Appeal 2018-000501
Application 13/172,386
Technology Center 3700

Before: MICHAEL L. HOELTER, SCOTT C. MOORE, and
BRENT M. DOUGAL, *Administrative Patent Judges*.

DOUGAL, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ appeals under 35 U.S.C. § 134(a) from a final rejection of claims 1–4, 6–28, 30–44, and 46–48. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm in part.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as H2Safe, LLC. Appeal Br. 2.

CLAIMED SUBJECT MATTER

The claims are directed to a fluid container. Claims 1 and 23 are independent. Claim 1, reproduced below with reference numbers added in brackets, is illustrative of the claimed subject matter:

1. A container², comprising
a container wall;
one or more layers arranged adjacent to the container wall,
each of the one or more layers having at least one sheet and at
least one of the one or more layers being a multi- sheet layer
having a plurality of sheets, wherein the one or more layers
including the plurality of sheets are coextensive;
wherein at least an innermost layer of the at least one or
more layers deforms in response to a failure in the container wall
to impede flow through the container wall.

REFERENCES

The prior art relied upon in the claim rejections on appeal is:

Prew	US 3,206,057	Sept. 14, 1965
Zinniger	US 3,927,788	Dec. 23, 1975
Carlson	US 4,023,617	May 17, 1977
Grosvenor	US 4,422,561	Dec. 27, 1983
Goggin	US 2005/0092756 A1	May 5, 2005
Tweet	US 2008/0264951 A1	Oct. 30, 2008

² We remind Appellant that our rules require that Appellant’s Appeal Brief include “[a] concise explanation of the subject matter defined in each of the rejected independent claims, which shall refer . . . to the drawing . . . by *reference characters*.” 37 C.F.R. § 41.37 (iii) (emphasis added). As reference to the drawings is missing in Appellant’s Appeal Brief, we include example reference numbers in brackets hereinafter: container [800], container wall [802], one or more layers [804,806,808], and an innermost layer [806,808].

REJECTIONS

Claims 1, 23, 46, and 47 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite.

Claims 1, 23, and 46–48 are rejected under 35 U.S.C. § 102(b) as being anticipated by Grosvenor.

Claims 1–4, 6–8, 10–21, 23, 25, 34–39, 41, and 46–48 are rejected under 35 U.S.C. § 102(b) as being anticipated by Tweet.

Claims 15–17 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tweet and Carlson.

Claims 9, 24, 26–28, 40, and 42–43 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tweet and Goggin.

Claims 30–33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tweet, Prew, and Zinniger.

Claim 44 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Tweet.

OPINION

35 U.S.C. § 112 Second Paragraph

Claim 1 includes the limitation “one or more layers including the plurality of sheets are coextensive,” and claim 23 includes “one or more coextensive layers.” The Examiner determined that these limitations are indefinite because “Applicant has failed to define how and what or which way [characteristic and/or physical properties] layer and sheets are coextensive.” Final Act. 3 (brackets in original).

The Examiner argues that “coextensive” means “having same boundaries or sharing a common boundary, existing or occurring at the same

time.” *Id.* The Appellant counters that “[t]he plain meaning of coextensive is ‘having the same spatial or temporal scope or boundaries.’”) Appeal Br. 5 (quoting www.merriam-webster.com/dictionary/coextensive).

For the purposes of examination, the Examiner focuses on the spatial aspect of the definition, i.e. “sharing a common boundary.” Final Act. 3. Appellant argues that the spatial aspect of coextensive is the correct focus, rather than the temporal aspect, citing the Specification for support. Appeal Br. 5 (citing Spec., Figs. 3A–C, 4A–B, 5A, 5E).

We agree that the spatial aspect of the definition is correct. As the Examiner notes, the meaning of coextensive is “depend[ent] upon [the] context of its usage.” Final Act. 3. The Examiner offers no argument that one of skill in the art would understand coextensive to mean “having the same temporal scope” or “occurring at the same time,” other than to point to the fact that the definition of coextensive is broad.

We turn now to the meaning of coextensive, emphasizing the spatial aspect. The difference between the Appellant’s and Examiner’s definitions is subtle, yet significant. The Examiner’s definition, for which no support or evidence is provided, is broad enough to cover sharing a single boundary, while Appellant’s definition, which is supported by dictionary evidence, is not. Appellant’s definition of “having the same spatial . . . boundaries” can also be understood as extending over the same space or corresponding exactly in extent. In view of Appellant’s Specification and dictionary evidence, we determine that one of skill in the art would understand the claimed usage of “coextensive” to mean having the same spatial boundaries or corresponding exactly in extent.

For these reasons, we do not sustain the 35 U.S.C. § 112, second paragraph rejection of claims 1, 23, 46, and 47.

35 U.S.C. § 102(b) – Grosvenor

Appellant argues that Grosvenor does not anticipate claims 1 or 23 because the plurality of sheets and layers in Grosvenor are not coextensive, contrary to the requirements of the claim. Appeal Br. 8. Appellant explains, Grosvenor’s layers 2–4 “are clearly shown as partially overlapping, [with] each subsequent layer extending farther than the last.” *Id.* (citing Grosvenor Fig. 1). Appellant also argues that Figure 4 shows, “[t]he lack of coextensive boundaries of layers 2–4” because “a bullet penetrating wall 1 . . . only intercept[es] layer 3, which further reinforces the fact that layers 2–4 do not share the same spatial scope or boundaries, which would cause the bullet to penetrate all three layers in turn.” *Id.*

As noted above, we determine “coextensive” to mean having the same spatial boundaries or corresponding exactly in extent. The Examiner’s rejection is based on an interpretation of “coextensive” that we rejected above, of sharing a single boundary. *See* Final Act. 4; Ans. 5–6. Thus, we do not sustain the rejection of claims 1, 23, 46, and 47 as anticipated by Grosvenor.

35 U.S.C. § 102(b) – Tweet

Claims 1–4, 6–8, 10–21, 46–48

Appellant argues that Tweet does not anticipate claim 1, because it does not teach “wherein at least an innermost layer of the at least one or more layers deforms in response to a failure in the container wall to impede flow through the container wall,” as required. Appeal Br. 9–10.

In the Final Action, the Examiner cites to “46+ 16,” 56, 57, 58 of Tweet in Figures 4–6 as teaching this feature. Final Act. 5. In the response to arguments, the Examiner further explains that “innermost layer 38 deforms [57, fig 4-6] in response to an undefined failure in the container wall to impede flow [58, para 0023-0024, fig 6] through the container wall.” *Id.* at 20.

Tweet Figure 3 is reproduced below showing a section of an aircraft fuel tank.

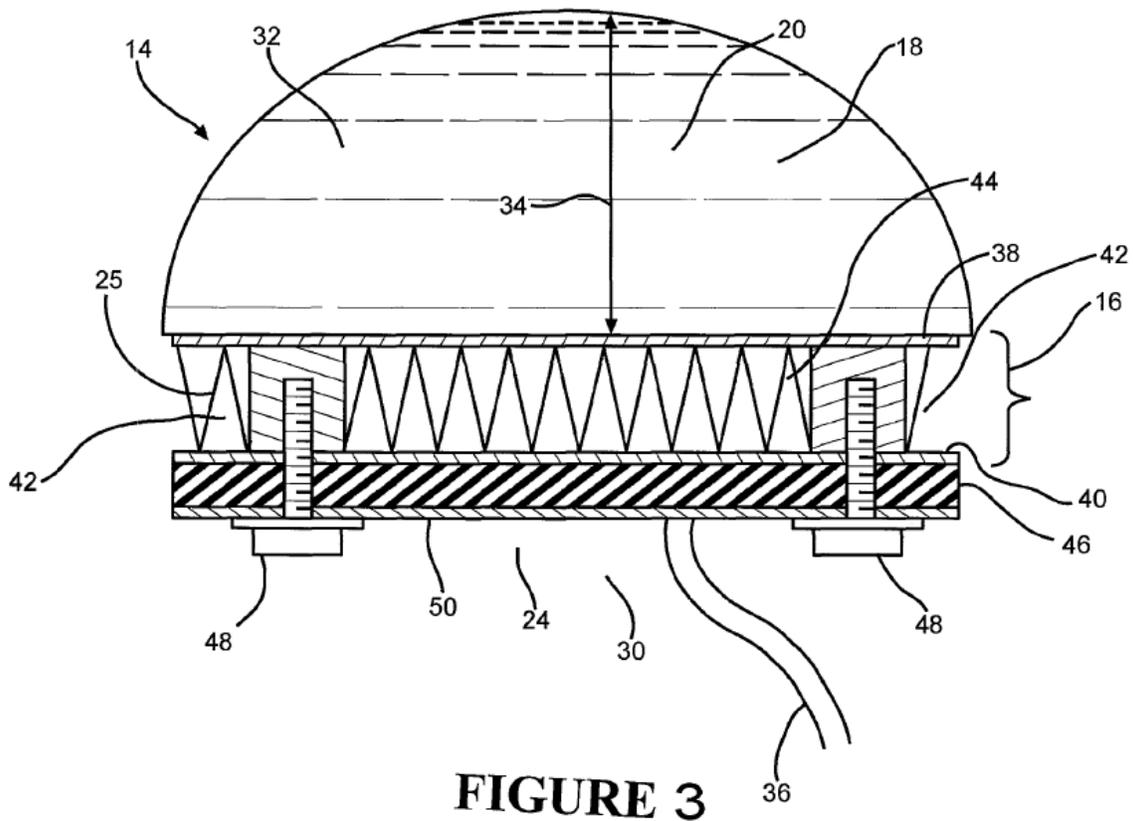


FIGURE 3

Tweet Figure 3, above, shows the multilayered structure of a fuel tank.

Tweet Figure 4, reproduced below, illustrates a bullet penetrating a fuel tank.

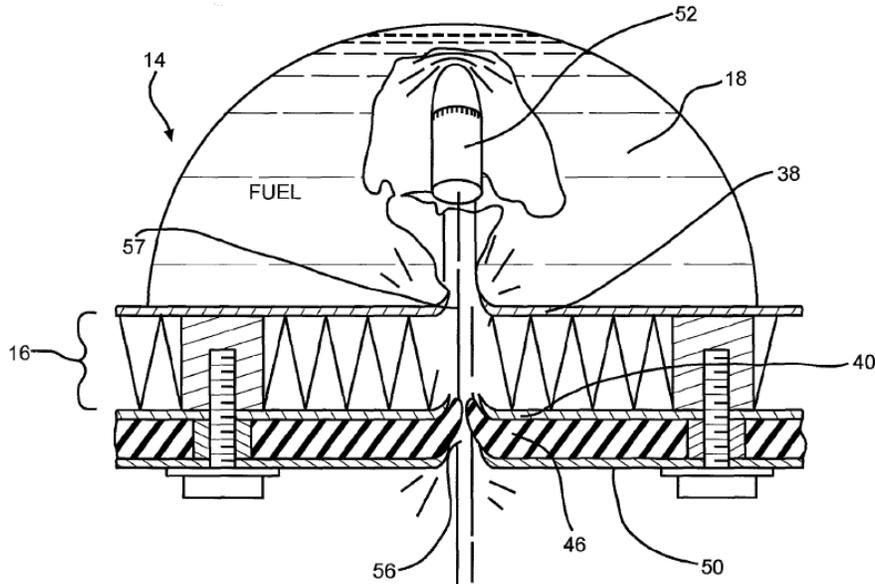


FIGURE 4

Tweet Figure 4, above, shows a bullet passing through part of a fuel tank.

Tweet Figure 6, reproduced below, illustrates a self-healing feature of a fuel tank.

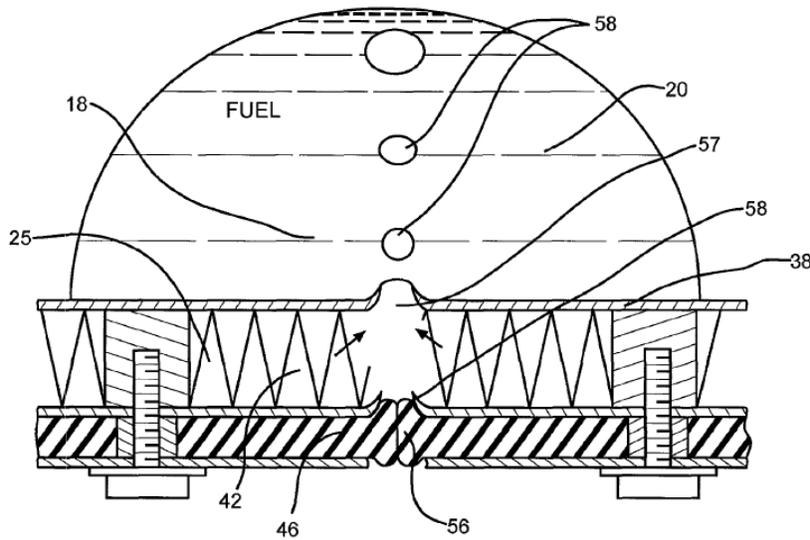


FIGURE 6

Tweet Figure 6, above, shows a rubber layer with self-healing.

Appellant argues that in Tweet, layer 16 deforms in response to a failure in the wall, but that layer 16 is not the innermost layer. Appeal Br. 9. Appellant impliedly admits that 38 is the innermost layer, but argues that once Tweet shows the bullet passing through 38 (i.e. the wall failure), no further deformation is shown or discussed. *Id.* at 10. Appellant argues “there is no teaching in Tweet, explicitly or inherently, that inner wall 38 *deforms in response to a failure in the container wall to impede flow through the container wall.*” *Id.*

In response, the Examiner agrees that layer 46 seals the hole, but also argues that layers 38, 40, and 42 are thin sheets which make up a honeycomb structure that once compromised

breaks the multiplicity of bonded contact points . . . resulting in a chain of catastrophic events resulting in twisting, curling and bending of thin sheets of honeycomb structure and [the] structure [will be] warped and collapsed. This jumble of honeycomb structure immediately impedes/obstructs fuel from flowing out of the tank as claimed.

Ans. 8–9. The Examiner further argues that this result is inherent in the structural makeup of the honeycomb structure. *Id.* at 9.

Though the Examiner’s Answer does not identify any paragraphs of Tweet’s Specification for support of this inherency position, the Final Action pointed to paragraphs 23 and 24. *See* Final Act. 5, 20. Rather than describing a system that will result in “a chain of catastrophic events,” Tweet paragraphs 23 and 24 describe a system designed to stay intact in the face of damage, thereby “substantially minimizing the leakage of fuel 20 through the holes 56 and 57.” Tweet ¶ 23. The Examiner does not identify any teachings in Tweet that would tend to show that it is necessarily the case that

innermost layer 38 of the honeycomb structure “deforms in response to a failure in the container wall to impede flow through the container wall.”

For this reason, we do not sustain the rejection of claim 1 as anticipated by Tweet. For this same reason, we also do not sustain the rejection of claims 2–4, 6–8, 10–21, and 46–48 which depend from claim 1.

Claims 23, 25, 34–39, 41

Appellant argues the rejection of claims 23, 25, 34–39, 41 together. We select independent claim 23 as representative. *See* 37 C.F.R. § 41.37(c) (1)(iv) (permitting the Board to select a single claim to decide the appeal as to a single ground of rejection of a group of claims argued together).

Claim 23 includes “one or more coextensive layers arranged between the contents region and the container wall . . . wherein at least one of the one or more layers deforms in response to a failure in the container wall to impede flow through the container wall.”

Appellant argues that Tweet’s “pressurized rubber layer 46 is not located between the contents region and the container wall,” and so it does not anticipate these limitations of claim 23. Appeal Br. 10. Appellant explains that this is because “layer 40 is the outer wall of the tank and pressurized rubber layer 46 is attached to the outside of the outer wall 40 with fasteners 48.” *Id.*

In the rejection, the Examiner considered backing member 50 as the container wall, rather than outer wall 40. Final Act. 5. Though Tweet describes compressed rubber layer 46 and backing member 50 as attaching to and effectively sealing outer wall 40 we see no reason why the Examiner’s position is unreasonable, that one of skill in the art would

consider backing member 50, which is the outermost structure of the fuel tank in Tweet, as forming the container wall once the assembled. We determine that the mere fact that Tweet uses different terminology than Appellant is insufficient to show that the Examiner's position is error.

For this reason we sustain the rejection of claims 23, 25, 34–39, 41 as anticipated by Tweet.

35 U.S.C. § 103(a)

Appellant argues that the dependent claims rejected as obvious over Tweet, alone or in combination with other references, should be allowable for the reasons discussed with respect to the independent claims. Appeal Br. 11–12. Thus, we sustain the rejections of the claims 24, 26–28, 30–33, 40, and 42–44 which depend from claim 23.

The Examiner does not overcome the deficiencies in the anticipation rejection of Tweet over claim 1 with any of the obviousness grounds. Thus, we do not sustain the rejections of claims 9, 15–17, and 22 which depend from claim 1.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
1, 23, 46, 47	112, Second Paragraph	Indefiniteness		1, 23, 46, 47
1, 23, 46-48	102(b)	Grosvenor		1, 23, 46-48
1-4, 6-8, 10-21, 23, 25, 34-39, 41, 46-48	102(b)	Tweet	23, 25, 34-39, 41	1-4, 6-8, 10-21, 46-48
15-17, 22	103(a)	Tweet, Carlson		15-17, 22
9, 24, 26-28, 40, 42-43	103(a)	Tweet, Goggin	24, 26-28, 40, 42-43	9
30-33	103(a)	Tweet, Prew, Zinniger	30-33	
44	103(a)	Tweet	44	
Overall Outcome			23-28, 30-39, 40-44	1-4, 6-22, 46-48

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