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3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			OLIVERA, ANGEL J	
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DEBORAH M. BRYAN, MARTIN J. BLAZE, and GOKHAN
KURUC

Appeal 2019-006623
Application 14/343,631
Technology Center 1700

Before TERRY J. OWENS, N. WHITNEY WILSON, and
BRIAN D. RANGE, *Administrative Patent Judges*.

RANGE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1, 4, 6, 8, 10, 11, 13–24, 38, and 40. We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

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 3M Company (formerly known as Minnesota Mining and Manufacturing Company). Appeal Br. 3.

CLAIMED SUBJECT MATTER²

Appellant describes the invention as relating to a filter element that seeks to reduce internal upstream and residual volumes (to avoid waste) while providing adequate pressure rating and without requiring too much space. Spec. ¶¶ 1–5. The filter could be used in a bioprocess application. *Id.* ¶ 6. Claim 1 is the only independent claim on appeal and is illustrative. We reproduce claim 1 below while adding emphasis to certain key recitations:

1. A filtration capsule comprising:

a single use filtration capsule having a first shell and a second shell that are sealably attached to each other by a weld, wherein both shells each comprise a sidewall and a curved, domed exterior surface that intersects with the sidewall and a substantially flat interior wall that is integral to the shell;

the curved, domed exterior surface on the first shell and the second shell each formed by a ribbing structure that is integral to each shell; the ribbing structure extending from an exterior wall and forming the curved, domed exterior surface; the ribbing structure comprising a plurality of domed axial lengths and a plurality of peripheral support rings intersecting with the domed axial lengths;

an inlet and an outlet that are substantially parallel to the substantially flat interior walls;

and

one or more filter elements contained in the filtration capsule, each filter element comprising an outer surface in fluid communication with the inlet and an inner surface in fluid communication with the outlet.

² In this Decision, we refer to the Final Office Action dated October 4, 2018 (“Final Act.”), the Appeal Brief filed March 21, 2019 (“Appeal Br.”), the Examiner’s Answer dated July 9, 2019 (“Ans.”), and the Reply Brief filed September 9, 2019 (“Reply Br.”).

Appeal Br. 12 (Claims App.) (emphasis added).

REFERENCES

The Examiner relies upon the prior art below in rejecting the claims on appeal:

Name	Reference	Date
Winzen	US 3,681,562	Aug. 1, 1972
Cooper	US 4,126,559	Nov. 21, 1978
Southall	US 4,347,208	Aug. 31, 1982
Olsen et al. ("Olsen")	US 5,965,019	Oct. 12, 1999
Bryan et al. ("Bryan")	US 2011/0297604 A1	Dec. 8, 2011
Hutto	GB 1,544,475	Apr. 19, 1979

REJECTIONS

The Examiner maintains (Ans. 2) the following rejections on appeal:

- A. Claim 20 under 35 U.S.C. § 112 as indefinite. Final Act. 5.
- B. Claims 1, 4, 6, 8, 11, 13, 16–19, 21–24, 38, and 40³ under 35 U.S.C. § 103 as obvious over Bryan or Bryan in view of Olsen. *Id.* at 6.
- C. Claims 4, 14, 15, 17, and 19 under 35 U.S.C. § 103 as obvious over Bryan or Bryan in view of Olsen in further view of Hutto. *Id.* at 12.
- D. Claim 8 under 35 U.S.C. § 103 as obvious over Bryan or Bryan in view of Olsen in further view of Winzen. *Id.* at 14.
- E. Claims 10 under 35 U.S.C. § 103 as obvious over Bryan or Bryan in view of Olsen in further view of Cooper. *Id.* at 15.

³ The Final Office Action references additional claims that have been canceled. *Id.* at 6.

F. Claims 20 under 35 U.S.C. § 103 as obvious over Bryan or Bryan in view of Olsen in further view of Southall. *Id.* at 15.

OPINION

Rejection A, indefiniteness. The Examiner rejects claim 20 as indefinite. Final Act. 5. In particular, the Examiner determines that the term “inner overmold” is unclear because “overmold” relates to a process of manufacture rather than structure. *Id.*

Appellant argues that “inner overmold” is not unclear because the Specification uses the term “inner overmold” to describe structure. Appeal Br. 7–8 (citing, e.g., Spec. Figs. 1–3, ¶¶ 43, 48); *see also* Reply Br. 1 (explaining that “overmold” may be defined as a “part or material that is molded over and around another part”). We agree with Appellant that, in view of the Specification, the Examiner has not adequately established that the term “inner overmold” is unclear. We, thus, do not sustain this rejection.

Rejections B–E, obviousness. The Examiner rejects claim 1 as obvious over Bryan in view of Olsen. Final Act. 6.⁴

We review the appealed rejections for error based upon the issues identified by Appellant and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential), *cited with approval in In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) (“[I]t has long been the Board’s practice to require an applicant to identify the alleged error in the examiner’s rejections.”). After considering the

⁴ Because, as explained herein, the Examiner’s rejection based on Bryan in view of Olsen is sufficient to affirm this rejection, we do not address the Examiner’s rejection based upon Bryan alone.

evidence presented in this Appeal and each of Appellant's arguments, we are not persuaded that Appellant identifies reversible error. Thus, we affirm these rejections for the reasons expressed in the Final Office Action and the Answer. We add the following primarily for emphasis.

As to rejections B through E, Appellant does not present substantively distinct arguments for any dependent claims. *See* Appeal Br. 8–10.

Therefore, consistent with the provisions of 37 C.F.R. § 41.37(c)(1)(iv) (2013), we limit our discussion to claim 1, and claims 4, 6, 8, 10, 11, 13–19, 21–24, 38, and 40 stand or fall together with claim 1.

The Examiner finds that Bryan teaches much of the structure recited in claim 1. Final Act. 6–7 (citing Bryan). The Examiner finds that Bryan teaches ribbing structure extending across the exterior surface of its top and bottom shells. *Id.* The Examiner finds that Bryan “is silent as to where both shells each comprise a sidewall and a curved, domed exterior surface that intersects with the sidewall; and axial lengths, of the ribbing structure integral to the shells, are also domed.” *Id.* at 7. The Examiner finds, however, that Olsen teaches a filter unit where exterior surfaces are domed. *Id.* (citing Olsen). The Examiner determines that it would have been obvious to substitute the exterior surface of Bryan's shells with the domed surfaces of Olsen “to yield the predictable results of encapsulating the filter cartridges within the filter unit.” *Id.* at 8.

Appellant argues that the references do not teach or suggest a filtration capsule having a domed exterior surface with an integral ribbing structure. Appeal Br. 8. We disagree. The Examiner finds that Bryan provides ribbed structure and Olsen suggests a domed shape. Appellant does not persuasively dispute the Examiner's findings with regard to either

reference and does not persuasively dispute the Examiner's stated reason why a person of skill in the art would have combined the teachings of these references. Final Act. 7–8. Use of Olsen's domed shape along with Bryan's structure is no more than “predictable use of prior art elements according to their established functions.” *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007).

Appellant also argues that claim 1's recited domed and ribbed structure gives advantages over other structures. Appeal Br. 8; Reply Br. 2–3. Superiority alone, however, is not sufficient to show that a result is unexpected. *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1371 (Fed. Cir. 2007) (“[A]ny superior property must be *unexpected* to be considered as evidence of non-obviousness” (emphasis in original)). As the Examiner explains, Appellant has not presented evidence that the argued advantage is unexpected. Ans. 5–6.

Appellant further argues that Bryan teaches away from a domed surface and does not suggest any advantages of a dome. Appeal Br. 8–9; Reply Br. 3. The evidence, however, supports the Examiner's finding that Bryan does not disparage use of a domed shape. Ans. 6. Moreover, no evidence indicates that Bryan's stacking is incompatible with a domed shape; just to the contrary, Olsen suggests that a stacked configuration is compatible with such a shape. Olsen Figs. 1–3.

Because Appellant's arguments do not identify error, we sustain the Examiner's rejections.

Rejection F, obviousness. The Examiner rejects claim 20 under 35 U.S.C. § 103 as obvious over Bryan in view of Olsen in further view of Southall. Final Act. 15. Claim 20 recites:

[t]he filtration capsule of claim 1, wherein the filter element comprises a separator to direct flow and an inner overmold, the inner overmold integral with the separator and formed from a thermoplastic elastomer, an o-ring seal between a protrusion of the second shell and the inner overmold of the filter element.

Appeal Br. 14 (Claims App.).

The Examiner finds that Bryan and Olsen are silent as to an o-ring between a protrusion of the second shell and an inner overmold of the filter element. Final Act. 16. The Examiner finds, however, that Bryan teaches that a seal may be formed by an o-ring and an overmolded seal. *Id.* The Examiner determines that it would have been obvious to combine an o-ring and overmolded seal as taught by Bryan with its protrusion and filter elements to predictably provide sealing. *Id.* at 16–17. The Examiner relies on Southall as teaching that the inner overmold may be a thermoplastic elastomer. *Id.* at 17.

To the extent Appellant raises the same arguments we address above in connection with claim 1 (Appeal Br. 10–11), the arguments are unpersuasive.

Appellant also argues that Bryan does not teach an o-ring located in the manner recited by claim 20. Appeal Br. 10–11. Appellant’s argument is unpersuasive because it only addresses Bryan’s explicit teachings. The Examiner’s rejection is based on obviousness rather than anticipation, and Appellant does not persuasively dispute the Examiner’s stated reasons why it would have been obvious to position an o-ring as claim 20 recites based on the teachings of Bryan. Ans. 9–11.

Because Appellant does not identify reversible error, we sustain this rejection.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
20	112	Indefiniteness		20
1, 4, 6, 8, 11, 13, 16–19, 21–24, 38, 40	103	Bryan, Olsen	1, 4, 6, 8, 11, 13, 16–19, 21–24, 38, 40	
4, 14, 15, 17, 19	103	Bryan, Olsen, Hutto	4, 14, 15, 17, 19	
8	103	Bryan, Olsen, Winzen	8	
10	103	Bryan, Olsen, Cooper	10	
20	103	Bryan, Olsen, Southall	20	
Overall Outcome			1, 4, 6, 8, 10, 11, 13–24, 38, 40	

TIME PERIOD FOR RESPONSE

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